EXHIBIT A

An Analysis of Racially Polarized Voting in Town of Islip Elections, 2005-2017

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February 27, 2019

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1)   I am a Professor of Political Science and the Director of the Center on Democratic Performance at the State University of New York at Binghamton. My primary teaching responsibilities at the University cover graduate and undergraduate courses on American and European politics of political representation and research methodology. I received my Ph.D. from Florida State University and have been employed as a professor since 1977, first at the University of New Orleans from 1977 to 1985, and since 1986 at Binghamton. I have been a research fellow at the Netherlands Institute for Advanced Study, the University of Essex, and the Free University of Amsterdam. My CV is attached as **Exhibit 1**.

2)   I have published and co-authored articles on racial representation in U.S. urban municipalities, partisan gerrymandering, and racially polarized voting analysis.

3)   I have not testified in federal court in the last five years.

4)   I have been retained by counsel for the plaintiffs in this case of *Flores et. al. v. Town of Islip* to provide my expert opinion. I am being paid $200 per hour plus expenses for my study and testimony in this case. My compensation is in no manner contingent on the outcome of this case.

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5)   My report is divided into six sections:

        a)   Section One provides an overview of the project. It describes the methods I used (bivariate regression analysis, ecological inference, and projection analysis) and the election data I relied on to form my opinions. A full catalogue of the materials I relied upon to produce this report is attached as **Exhibit 2.**

        b)   Section Two explains the logic of my analysis through applying these methods to two examples: first to the example of the 2015 election for Tax Receiver and then to the 2017 Town Council election.

        c)   Section Three presents and interprets the results of my analysis of 18 endogenous elections: 7 for Town Council, 10 for Town-wide office (Supervisor, Clerk, and Tax Receiver), and a 2006 referendum on the Town's at-large election system.[1]

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[1] Endogenous elections are those held for purposes resulting in internal governance of the jurisdiction in question. Exogenous elections touch on and are relevant to the governance of the jurisdiction in question but are called with other purposes in mind.

d)   Section Four conducts two projection analyses to evaluate whether Latino voters

would be able to elect their candidates of choice to the Town Council in a fairly

drawn single-member district. The first analysis uses election data from Suffolk

County Legislative District 9, where Latinos are a majority of the approximately

86,000 residents, in order to compare the ability of the same voters to elect their

candidate of choice in an already established single member district (District 9)

where Latinos are residentially concentrated. With a 2010 total population of

approximately 335,000 in the Town, the approximately 86,000 District 9 residents

roughly constitute the population size appropriate for one of four single-member

Town Council districts The second projection analysis tallies votes from recent

Town election among the electoral districts in a hypothetical Latino-majority

district constructed by plaintiffs' demographic expert, Professor Andrew

Beveridge.

e)   Section Five presents and interprets the results of my analysis of 31 exogenous

elections: 9 Suffolk County elections in which all eligible voters in the Town

could participate, 9 New York State elections in which all eligible voters in the

Town could participate, and 13 elections to national office in which all or nearly

all eligible voters in the Town could participate.

f)   Section Six summarizes my results and offers my conclusions.

SECTION ONE: OVERVIEW

6)   At-large elections can have a super-majoritarian effect on political representation by

effectively excluding minority voices from electorally based representational processes.

The U.S. government recognized this potentially undesirable effect in 1842 when it

required states that had been using at-large elections for the U.S. House of

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Representatives to institute districts, except in special circumstances, and in 1967 when it

forced the remaining states with at-large House elections. *See* 5 Stat.491 (1842) and 2

USC § 29c) (1967). Whether an exclusionary effect impacts a particular jurisdiction

depends in large part on the size and voting patterns of the majority and minority groups

in that area.

7) I understand that the Supreme Court has established a three-pronged set of necessary pre-

conditions to evaluate whether, under Section 2 of the Voting Rights Act, "the minority

group['s]…submergence in a white multimember district impedes its ability to elect its

chosen representatives." *Thornburg v. Gingles*, 478 U.S. 30, 90 (1986). The three factors

are (1) sufficient group size to constitute a majority of a single-member district, (2)

minority group voter cohesion, and (3) white bloc voting in opposition to the minority

group's electorally-expressed preference. The Supreme Court has also considered the

existence of nine other factors highly relevant, including "the extent to which voting in

the elections of the state or political subdivision is racially polarized" (Senate Factor 2, an

inference derived from the combination of factors 2 and 3) and "the extent to which the

state or political subdivision has used unusually large election districts, majority vote

requirements, anti-single shot provisions, or other voting practices or procedures that may

enhance the opportunity for discrimination against the minority group" (Senate Factor 3).

Id. at 37. My opinions in this case are relevant to the second and third preconditions and

these two other factors. Specifically:

a)   As discussed in detail in this report, in my opinion, analysis of election data for Islip using appropriate statistical methods demonstrates the existence of *Gingles* factor 2 (minority cohesion) and factor 3 (white bloc voting in opposition) in Islip, which, by implication, show that voting in Islip is racially polarized.

b)   I also conduct a projection analysis, which shows what election outcomes for minority voters' candidates of choice would likely be but for Islip's at-large electoral format (i.e., who would be elected in a fairly drawn set of single-member districts).   When minority voters' candidates of choice are consistently defeated under the Town's at-large elections but could be expected to prevail under single-member districts, we have sound reason to conclude that the choice of one election system instead of the other causes the difference.

c)   The Town of Islip's at-large procedure for electing members of the Town Council includes factors that impede single-shot voting. Single-shot voting refers to voters selecting only one candidate when they are entitled to select more than one. This strategy, when adopted by minority voters, can concentrate support behind minority voters' candidate of choice while the majority splits their votes among several candidates. Islip's election procedure prevents minority voters from using a single-shot voting strategy by having a designated post for one Council Member, Town Supervisor. It further reduces the efficacy of single-shot voting by electing a small portion of the Town Board in odd-numbered years.

8)   In voting rights litigation, and the social sciences more generally, the analysis of racially polarized voting patterns and race-related voter participation rates takes three forms: (a) extreme-case analysis, (b) bivariate regression analysis, and (c) ecological inference.

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Extreme case and regression methods were used in *Thornburg v. Gingles* and cited with approval.[2] The third method, ecological inference, was developed in the mid-1990s and has been used in legal proceedings on questions of racially polarized voting as well as in academic studies applied to a variety of topics.[3]

9)   The three methods share this common intuition: When electoral units, such as New York State's electoral districts ("EDs"), with high versus low concentrations of racial or language minority groups show correspondingly high and low levels of voter support for a candidate, respectively, one infers that differences in vote support are grounded in the differences in the group composition of the EDs.

10)   Based on my initial review of the racial/ethnic residential patterns in Islip, I concluded that it would not be possible to rely on extreme case analysis to estimate minority voter cohesion or the degree of racially polarized voting. That is because the method relies on looking at voting patterns in EDs with extreme, nearly homogeneous, racial/ethnic compositions. For example, if all Latino voters in a town resided in EDs occupied exclusively by Latinos, then observing the votes cast in those EDs would tell us how Latino voters voted. If just a limited number of EDs were exclusively occupied by Latino voters, then observing votes in those EDs would offer some insight into how Latino

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[2] See *Thornburg v. Gingles* (1986, 52-3 and fn.20), citing "Engstrom & McDonald, "Quantitative Evidence in Vote Dilution Litigation: Political Participation and Polarized Voting", 17 <u>Urban Lawyer</u> 369 (Summer 1985); Grofman, Migalski, & Noviello, The "Totality of Circumstances Test" in Section 2 of the 1982 Extension of the Voting Rights Act: A Social Science Perspective, 7 <u>Law & Policy</u> 199 (Apr. 1985)." For an extension to analysis of three groups (as here: African Americans, Latinos, and others/principally whites), using ecological regression see Engstrom, Richard L. and Michael D. McDonald. "Quantitative Evidence in Vote Dilution Litigation, Part II: Minority Coalitions and Multivariate Analysis." <u>Urban Lawyer</u>, 19 (Winter 1987): 65-75.

[3] For a listing of voting rights cases using the three methods, through 2014, along with an application of the ecological inference method, see de Benedictis-Kessner, Justin "Evidence in Voting Rights Act Litigation Producing Accurate Estimates of Racial Voting Patterns," <u>Election Law Journal</u> 14 (December 2015): 361-81. For details of using ecological inference analysis applied to three demographic groups (as here: Hispanics, non-Hispanic blacks, and others / principally Anglo-whites), see Lau, Olivia, Ryan T. Moore, and Michael Kellerman. (2007) "eiPack: R x C Ecological Inference and Higher Dimension Data Management," <u>R News</u> 7:43-7.

voters voted. In Islip, however, no ED has a concentration of Hispanics of citizen voting

age population beyond 70 percent, and therefore there are no extreme case Latino EDs.

Without extreme case Latino EDs, there is no way to use the method to arrive at

estimates of Latino voter cohesion nor any way to use the method to describe racially or

ethnically polarized voting. Therefore, I rely on bivariate regression analysis and

ecological inference. A description of how these methods work is provided below.

11)   Bivariate regression analysis ("regression analysis") applies a regression to derive a best

fitting line in order to determine if a correlation exists between the percentage of Latino

CVAP ("Citizen Voting Age Population") in an ED and the percentage of votes cast for a

particular candidate. Ecological inference produces estimates of voting patterns by race

by analyzing the bounds of the data to produce maximum likelihood statistics. These

methods produce my polarized voting analysis.

12)   After analyzing the elections through bivariate regression analysis and ecological

inference, I conduct a projection analysis. Projection analysis uses the results of the

polarized voting analysis to evaluate the ability of Latino voters to elect their candidates

of choice under the Town's current at-large system compared to their expected ability to

elect their candidates of choice in an election conducted under fairly drawn single-

member districts. Many projections use the numerical estimations of minority cohesion,

white crossover voting, and group turnout rates to ask whether a Latino candidate of

choice could be expected to be elected in a hypothetical majority Latino district.[4]

Conveniently and informatively, conducting a projection analysis of this sort for Islip is

less hypothetical than in other circumstances. This is because Islip has within its borders

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[4] *See, e.g.*, Litchman, Allan J. (1991) "Passing the Test: Ecological Regression in the Los Angeles County Case and Beyond." Evaluation Review 15: 770-99, at 776-8.

a majority Latino district used to elect a representative to the Suffolk County Legislature District 9 ("LD9"). Therefore, the results of LD9 elections and whether Latino voters elected their candidates of choice permit us to project what would happen in a Town Board election under a fairly drawn single-member district. All projection analysis requires is an identification of which candidate was the candidate of choice for Latino voters and a calculation of the actual votes for that candidate and her or his opponent among the EDs contained in LD9. In elections where the Latino voters' candidates of choice lost Town-wide, but out-polled her or his opponent in LD9, the choice of using an at-large system is identifiable as the source of the difference. In a single member district system, Latino voters' candidates of choice would have won these elections.

13) Table 1 lists the results of the eight Town Council elections from 2005 through 2017. Every two years, in odd-numbered years, two Islip Town Council members are elected to staggered four-year terms. Column 2 lists the major party candidates contesting each of the eight elections.[5] Voters at the polls can vote for two, one, or no Council candidate. As a result, it is not possible to say how many individuals actively participated in Council elections because each voter can cast zero, one, or two ballots. Instead, as shown in column 3, voter participation in Town Council elections is recorded as voters signing in at the polls. Vote tallies by party of the candidates are reported in columns 5 and 6, and their respective votes as percentages of voters at the polls are reported in column 7. Column 8 reports the population database I used for the polarization analyses.

14) Table 2 reports the results of elections to single-member town-wide offices (Supervisor, Tax Receiver, and Clerk), which are also conducted at-large. The information is

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[5] Often a major party candidate occupies a position on ballot lines of two or more parties. Vote counts and percentages in Tables 1-5 sum candidate votes across all ballot lines he or she occupies.

organized in a manner similar to Table 1. In addition, the last row reports the results of a

2006 referendum vote on the question of whether the Town should change its council

election format from at-large to single-member districts.

15)   I also analyzed eight elections with major party competitors for Suffolk County offices

from 2005-17. Results of votes received within the Town of Islip are listed in Table 3.

Similarly, Table 4 reports the results of Islip voters' candidate support in statewide

elections for New York Governor, Attorney General, and Comptroller for 2006, 2010,

and 2014.

16)   The final sets of elections analyzed are support from voters in the Town of Islip for major

party candidates seeking national office, shown in Table 5. The votes for President and

U.S. Senate cover all EDs in Islip. The U.S. House 2012-16 elections in congressional

district 2 (CD 2) cover nearly all but not precisely all EDs in the Town (212 of 226).

That means the analysis for U.S. congressional district 2 can be taken as strongly

suggestive but not precisely indicative of Town-wide voting patterns.

Table 1: Vote Tallies for the Eight Islip Town Council Elections, 2005-17

Year	Candidate	# Voters at the Polls	Republican Vote	Democratic Vote	Candidate % of Voters at the Polls	Population Data
2017	Bergin Weichbrodt (R)	62893	32244		51.3	2012-16
	O'Connor (R)	62893	30104		47.9	2012-16
	Gonzalez (D)	62893		23302	37.1	2012-16
	Fenley (D)	62893		22820	36.3	2012-16
2015	Cochrane (R)	35564	19047		53.6	2012-16
	Mullen (R)	35564	18754		52.7	2012-16
	McDermott (D)	35564		13138	36.9	2012-16
	Pulitano (D)	35564		12533	35.2	2012-16
2013	Flotteron (R)	36822	20343		55.2	2011-15
	Bergin Weichbrodt (R)	36822	19998		54.3	2011-15
	Fidelia (D)	36822		14089	38.3	2011-15
	Hafele (D)	36822		14081	38.2	2011-15
2011	Cochrane (R)	51247	26536		51.8	2009-13
	Senft (R)	51247	26380		51.5	2009-13
	Parrington (D)	51247		20748	40.5	2009-13
	Ortiz (D)	51247		20617	40.2	2009-13
2009	Bergen (R)	38910	20903		53.7	2007-11
	Flotteron (R)	38910	19180		49.3	2007-11
	Bodkin (D)	38910		15378	39.5	2007-11
	Morgo (D)	38910		13483	34.7	2007-11
2007	Fenley (R)	43303	18312		42.3	2005-09
	Schettino (R)	43303	16586		38.3	2005-09
	Edwards (D)	43303		23345	53.9	2005-09
	Parrington (D)	43303		20339	47.0	2005-09
2005	Bodkin (R)	41459	21915		52.9	2005-09
	Flotteron (R)	41459	18381		44.3	2005-09
	Parrington (D)	41459		16690	40.3	2005-09
	Alvarez (D)	41459		12680	30.6	2005-09

Table 2: Vote Tallies for Islip Town-wide Political Office & Proposition Elections, 2006-15

Year	Office	Republican Candidate	Democrat Candidate	Total Vote	Rep Vote	Dem Vote	Rep%	Dem%	Population Data
2015	Supervisor	Carpenter	Licari	34056	21168	12888	62.2	37.8	2012-16
	Tax Receiver	Weik	Castro	33359	22147	11212	66.4	33.6	2012-16
	Clerk	Murray	Fidelia	32221	19556	12665	60.7	39.3	2012-16
2011	Supervisor	Croci	Nolan	49709	25026	24683	50.3	49.7	2009-13
	Tax Receiver	Weik	RossiFontana	47018	26735	20283	56.9	43.1	2009-13
	Clerk	Murray	Fields	47172	24621	22551	52.2	47.8	2009-13
2007	Supervisor	Datre	Nolan	41581	12957	28624	31.2	68.8	2005-09
	Tax Receiver	Allen	Slinkosky	39174	21375	17799	54.6	45.4	2005-09
	Clerk	***Cross-party endorsement***		~~~	~~~	~~~	~~~	~~~	2005-09
2006	Supervisor	Green	Nolan	68818	29206	34295	42.4	49.8	2005-09
Year	Issue	Prefer District	Prefer At-Large	Total	Yes	No	%Yes	%No	Pop. Data
2006*	Dist vs At-large Proposition	Vote = Yes	Vote = No	46434	21371	25063	46.0	54.0	2005-09
* The wording of the 2006 proposition question, as reported on the County's election website, was, "Shall the local law adopted by the Islip Town Board on March 07, 2006, entitled, 'a local law providing for the establishment of a ward system for the election of councilpersons in the Town of Islip' be approved?"									

Table 3: Vote Tallies of Islip Voter Support in Major-party Contested County Elections, 2005-17

Year	Office	Republican Candidate	Democratic Candidate	Total Vote	Rep Vote	Dem Vote	Rep%	Dem%	Population Data
2017	County DA	Perini	Sini	57929	20716	36380	35.8	62.8	2015
	County Sherriff	Zacarese	Toulon	56250	27698	27520	49.2	48.9	2015
2015	County Exec	O'Connor	Bellone	34232	15339	18880	44.8	55.2	2015
2014	County Comptroller	Kennedy	Gaughran	56054	29758	26284	53.1	46.9	2015
2011	County Exec	Carpenter	Bellone	49977	23140	26809	46.3	53.6	2009-13
2006	County Clerk	Pascale	Viloria-Fisher	63416	33913	29498	53.5	46.5	2005-09
2005	County Sherriff	Tisch	DeMarco	37097	18546	18551	50.0	50.0	2005-09
	County Treasurer	Carpenter	Crespo	36637	23726	12223	64.8	33.4	2005-09

Table 4: Vote Tallies of Islip Voter Support in Statewide Office Elections, 2006-14

Year	Office	Republican Candidate	Democratic Candidate	Total Vote	Rep Vote	Dem Vote	Rep%	Dem%	Population Data
2014	Governor	Asotino	Cuomo	61345	28552	29794	46.5	48.6	2015
	Atty General	Cahill	Schneiderman	60727	28653	30478	47.2	50.2	2015
	Comptroller	Antonacci	Dinapoli	60950	27896	31431	45.8	51.6	2015
2010	Governor	Paladino	Cuomo	75234	44048	28486	58.5	37.9	2008-12
	Atty General	Donovan	Schneiderman	71701	33130	37964	46.2	52.9	2008-12
	Comptroller	Wilson	Dinapoli	72510	33430	37409	46.1	51.6	2008-12
2006	Governor	Faso	Spitzer	69147	43926	24146	63.5	34.9	2005-09
	Atty General	Pirro	Cuomo	68295	33108	33946	48.5	49.7	2005-09
	Comptroller	Callaghan	Hevesi	65271	33949	29029	52.0	44.5	2005-09

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Table 5: Vote Tallies of Islip Voter Support in Elections for National Office, 2006-16

Year	Office	Republican Candidate	Democratic Candidate	Total Vote	Rep Vote	Dem Vote	Rep%	Dem%	Population data
2016	President	Trump	Clinton	137094	68279	63607	49.8	46.4	2012-16
	U.S. House	King	DuWayne	120044	70055	49931	58.4	41.6	2012-16
	U.S. Senate	Long	Schumer	130166	46697	81068	35.9	62.3	2012-16
2014	U.S. House	King	Mather	56980	36949	18963	64.8	33.3	2012-16
2012	President	Romney	Obama	120466	53777	65133	44.6	54.1	2010-14
	U.S. House	King	Falcone	101802	54974	46781	54.0	46.0	2010-14
	U.S. Senate	Long	Gillibrand	112943	37702	73888	33.4	65.4	2010-14
2010	U.S. Senate A	Townsend	Schumer	74224	29418	44053	39.6	59.4	2008-12
	U.S. Senate B	DioGuardi	Gillibrand	71757	32182	38360	44.8	53.5	2008-12
2008	President	McCain	Obama	132370	59878	71308	45.2	53.9	2006-10
2006	U.S. Senate	Spencer	Clinton	69774	27120	41586	38.9	59.6	2005-09

SECTION TWO: METHODOLGY AND EXAMPLES

A. **2015 Town Receiver of Taxes Election**

17) To provide a detailed explanation of how regression and ecological analysis produce reliable and reasonable estimates of racially polarized voting patterns, I first work through the 2015 Town Receiver of Taxes election. I chose this election as the basis for a detailed methodological explanation because voters could only choose one candidate (multi-member office elections, such as the "vote-for-two" Town Council elections, are more complex), it was the most recent vote-for-one Town office election, and it involved a candidate with a Latino surname. Building off the example of the 2015 Tax Receiver election, I offer a second detailed example through an application of the analytical methods to the 2017 vote-for-two Council election below.

18) In a single-office, vote-for-one election involving two candidates, knowing the percentage of a group that voted in support of one candidate reveals the percentage of the group that supported the other candidate. For example, if Latinos offered 100 percent of their support to candidate *A* then we know they offered 0 (zero) percent of their support to candidate *B*. In a vote-for-two election, as occurs in Town Council elections, if Latinos offered 100 percent support to candidate *W*, we do not know what level of support, if any, they provided to candidates *X, Y,* and *Z* until we estimate the voting pattern for each candidate individually. For example, it's possible that Latinos gave 100 percent support for *W* by single-shot voting and withheld all votes for the others, but also possible that they also gave 100 percent support to, say, candidate *X* (or *Y* or *Z*).

19) In the 2015 election for Town Receiver of Taxes, Maxima Castro (Democrat and Working Families) ran against Alexis Weik (Republican, Conservative, Independence,

and Reform). Weik won the election with 22,147 votes; Castro received 11,212 votes (see Table 2, *supra*).

20)   I use citizen voting age populations ("CVAP") as the best descriptor of information on the racial/ethnic composition of voters in EDs. The data on the 2015 vote counts for candidates and on the estimates of the 2015 CVAP for each of the EDs were delivered to me electronically by Professor Andrew Beveridge, a demographic expert retained by plaintiffs in this case. Professor Beveridge provided electronic copies of the data for all elections I analyzed in connection with my opinions in this report, including the 2015 elections.

21)   Figure 1 provides a graphic display of the relationship between Castro's vote support and the racial/ethnic composition of the relevant EDs. The circles and dots in the interior of the graph represent the position of the various EDs with respect to their percentage vote support for Castro (vertical axis) and the Latino percentage of CVAP (horizontal axis). To clarify the analysis, the graph uses red dots to indicate EDs in which the non-Hispanic black CVAP percentage in an ED is greater than the overall Latino CVAP percentage in that ED.

Figure 1: Plot of Relationship between Voter Support for Maxima Castro and Race/Ethnicity in the 2015 Tax Receiver Election

Hispanic CVAP as % of Total CVAP

○ EDs where Latino CVAP is greater than non-Hispanic black CVAP

● EDs where non-Hispanic black CVAP is greater than Latino CVAP
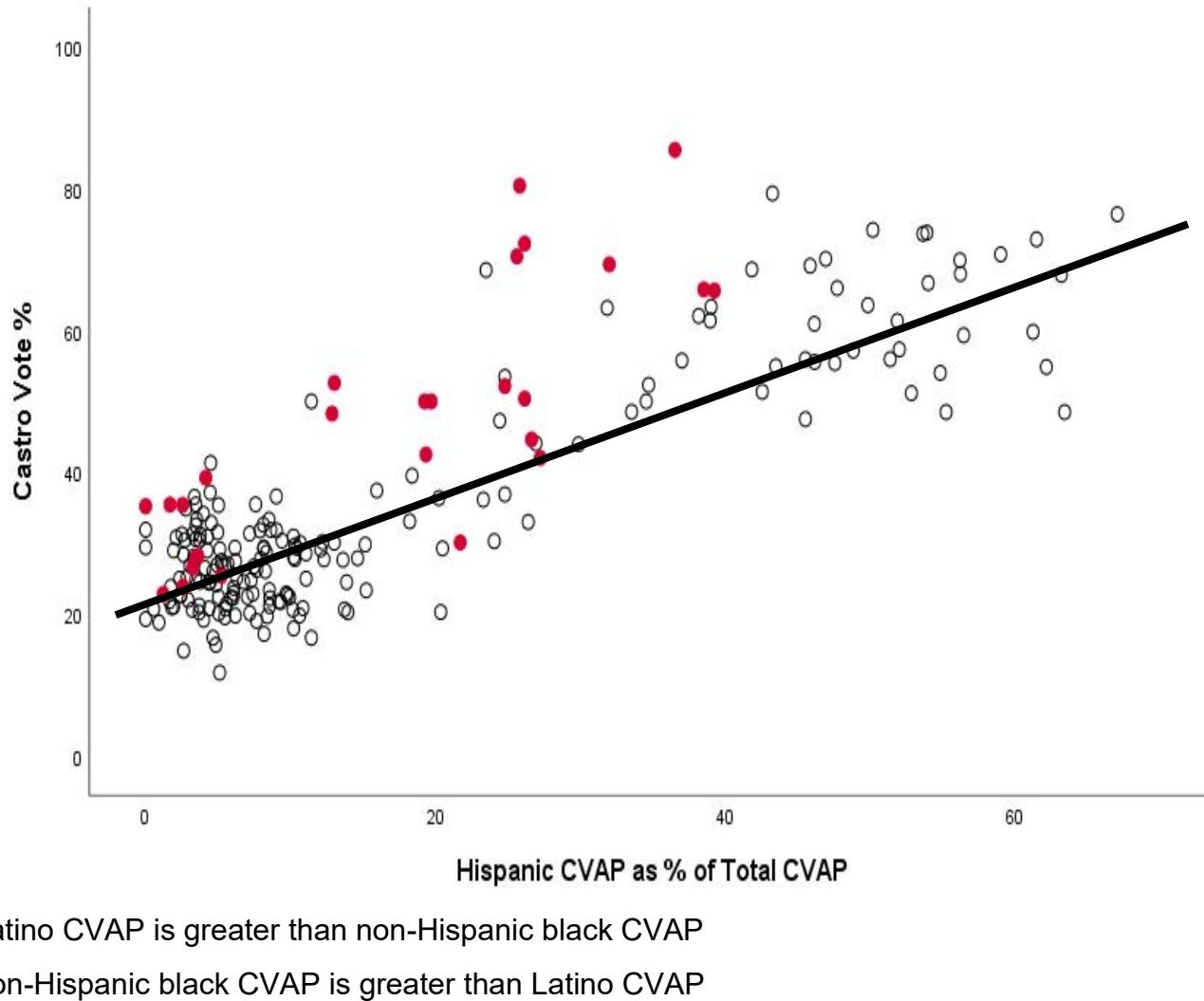
22)   It is visually clear that support for Castro is directly related to the proportion of Latino

citizens of voting age in each ED. In predominantly white EDs, support for Castro is

weak and matches the proportion of Latino voters in those areas between 20% and 40%.[6]

There is also a tendency for EDs with greater than 20 percent Latino CVAPs to support

Castro at relatively and increasingly higher percentage levels as the concentration of

Latino CVAP in an ED increases. In other words, vote support for Castro increases as

Latinos comprise an increasing percentage of voting age citizens in an ED compared to

white voting age citizens. On this basis I infer that Latino voters provided more support

for Castro compared to white voters.

1.   Calculating Voter Support: Regression Analysis

23)   Regression and ecological inference analyses provide a more robust inference than what

is visible in the graph above in the form of numerical estimates for the level of support

for Castro by each of the three groups of voters (Latinos, non-Hispanic blacks, and

whites.[7] The reason for deriving separate vote support estimates for the three groups is to

ensure that the direct relationship between the rise in Castro support and EDs with

increased Latino CVAP is not actually because non-Hispanic blacks residing in EDs with

Latinos are, by themselves, the reason support for Castro increases. From the separate

numerical values, it is possible to provide reasonable and reliable precision about the

cohesion of Latino voters and the degree, if any, of white bloc voting in opposition to the

Latino voters' preferred candidate. The degree of racially polarized voting, if any, is the

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[6] I use "white" in a loose sense to refer to people the Census records as neither Hispanic nor non-Hispanic black. In the analysis of this 2015 election, the CVAP counts by group are Hispanic 41,598, non-Hispanic black 23,162, and white 155,687 (with 3 percent of those in my loosely termed "white" category recorded by the Census as Asian, less than half a percent Native American, and another less than half a percent Hawaiian/Pacific Islander).
[7] *See,* fn. 6, *supra*

difference between Latino and white voter support for the Latino preferred candidate

when the groups prefer different candidates.

24)   Regression analysis uses a formula to derive the "best fitting line" to all the data points to

demonstrate the direct relationship between increased support and increased racial or

ethnic composition of EDs. For interpretative convenience, this "best fitting line"

reflecting increased Castro support among Latino voters is drawn through the data points

in Figure 1.[8] This line demonstrates the direct relationship between increased support for

Castro and increased Latino concentration of voters in EDs, after taking separate account

of non-Hispanic black support. That is, in order not to confuse attribution of vote support

increases due to increased concentrations of all non-white voters, regression analysis

takes account of the increases attributable to both Latinos and non-Hispanic black voters

and apportions increases attributable to each group.

25)   From the linear estimations in Figure 1, I can infer that, as a generalized matter, where an

ED has zero percent Latino CVAP and zero percent non-Hispanic black CVAP (i.e., is

100 percent white), Castro's estimated vote support percentage is 22.7. This number,

22.7 percent, is the regression based estimate of white voter support for Castro. Next, as

the percent Latino CVAP in an ED increases, regression analysis estimates that vote

support for Castro increases. For instance, from the regression estimate, a 10 percentage

point increase in Latino CVAP is expected to lead to an increase of 5.26 percentage

points in support for Castro. A projected movement from zero percent Latino and zero

percent non-Hispanic black CVAP (where, as just reported, Castro's vote support in a

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[8] The line shown in the graph is based on a calculation that weights the EDs equally, regardless of the number of votes cast in the different precincts. The numerical estimations are based on weighting the precincts with respect to votes cast, because to accurately describe how individuals behaved one wants to give much more weight to a precinct where 1,000 votes were cast than to one where 10 votes were cast.

100 percent white ED is estimated to be 22.7 percent) to 100 percent Latino CVAP adds

an estimated 52.6 percent support for Castro above the 22.7 level of support from white

voters. Thus, the regression estimates indicate that Castro received 22.7 percent support

from white voters versus 75.3 percent support from Latino voters (i.e., 22.7 + 52.6 =

75.3). The 52.6 percentage point difference between Latino and white voter support is

statistically significant; that a difference this large could be attributed to mere chance far

exceeds one in a ten million. [9]

26)   Regression also demonstrates that the voting pattern for Islip's 2015 Tax Receiver

election is racially polarized. Castro is the candidate of choice of Latino voters, receiving

approximately three-quarters of their votes. White voters offered cohesive support to

Weik, 77.3 percent (i.e., 100 minus the 22.7 white voter support for Castro). In different

words, white voters as a bloc voted against the Latino candidate of choice. Weik won as

a result of the Town-wide white majority supporting her; the Latino voters' candidate of

choice, Castro, lost.

27)   Regression analysis also offers estimates of uncertainty associated with each group's

estimated support. "Uncertainty" refers to doubt due to the variability associated with the

estimation technique as applied to the data at hand. It is an estimated variability akin to

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[9] Statistical significance applied to the difference between some characteristic of two groups, here between Latino and white voter candidate support, is a way of evaluating whether it is plausible to think the difference is a result of mere chance attributable to random forces (not statistically significant) or is so consistently systematic that it is much more likely a true, systematic difference (is statistically significant). It is conventionally evaluated to a degree of being "95% confident" that the difference is systematic, often described as having a p-value of < 0.05 (i.e., probability the difference is random is less than 5 in 100). *See, e.g.,* Kerlinger, Fred N. and Howard B. Lee. (2000). Foundations of Behavioral Research. Belmont, CA: Wadsworth, pp. 232-3. Confidence intervals serve essentially the same evaluative statistical purpose. A confidence interval constructed around a statistical result, such as the level of Latino or white support for a candidate, allows us to say we are 95 percent confident that the actual result (level of a group's support) is inside the lower and upper bounds of the interval. *See, e.g.,* Blalock, Hubert M. Jr. 1979. Social Statistics (revised 2nd ed.), New York, NY: McGraw-Hill, pp. 208-13.

the percent margin of error frequently used in polling results. The regression

uncertainties, by group, are $\pm$ 3.7 for Latinos, $\pm$ 5.4 percent for non-Hispanic blacks, and

$\pm$ 0.6 percent for whites. To record and interpret these numbers in a way similar to

polling margins of error, each number needs to be multiplied by two (technically 1.96) to

provide statistical significance at a 95 percent level of confidence.

28)   Adding these uncertainties to each group's best estimate of support for Castro means the

best estimates can be read with the following qualifications:

a)   Latino support for Castro = 75.3% $\pm$7.3% (68.0-82.6 percent).

b)   Non-Hispanic black support for Castro = 79.9% $\pm$10.6% (69.3-90.5 percent).

c)   White support for Castro = 22.7% $\pm$1.2% (21.5-23.9 percent).

One way to evaluate whether the difference between Latino and white support for a

candidate is statistically significant is to look to see whether the confidence interval for

Latinos overlaps with the confidence interval for whites. The low point of 68.0 for

Latinos is nowhere near the 23.9 high point for whites, which, to repeat, means the

difference is statistically significant (by a wide margin).

     2.   Calculating Voter Suport: Ecological Inference

29)   The ecological inference ("EI") method of analysis was developed in the mid-1990s as a

computationally intensive approach for estimating how individuals behave (e.g., provide

a level of support for a candidate). Professor Gary King, Professor of Political Science at

Harvard University originated this method.[10] King's book spells out the statistical and

mathematical details of the EI methodology as it applies to a two-group analysis (e.g.,

black voters). The methodology was expanded later to apply to three-group analyses. EI

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[10] King first described the approach in his book A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data (Princeton, NJ: Princeton University Press, 1997).

is appropriate in this case because it takes separate account of Latino, non-Hispanic black, and white voting patterns.[11]

30)   EI determines levels of candidate support from the possible bounds of both the jurisdiction-wide information (in this case the Town) and each ED under investigation. For instance, we know that a 40 percent turnout rate among approximately the 155,000 white CVAP is outside the bounds of possibility because that accounts for more voters casting a ballot in the 2015 Town of Islip Receiver of Taxes election than there were actual ballots cast (33,359). That is, overall and within EDs, there are limits to the possible numerical descriptions of candidate support and voter turnout. EI methodology relies on these limits to arrive at estimates of how individuals from different groups behaved.

31)   To illustrate, I will use an example of how EI works as it hones in on its best estimate of candidate support and turnout. The process might start by assuming 25 percent of white CVAP cast ballots and gave 80 percent of their support to Weik in the Town Receiver of Taxes election. That result turns out to be impossible because it would mean that whites cast 38,922 votes (0.25 x 155,687 = 38,922 (where 155,687 is the estimated white CVAP in 2015) when in fact only 33,359 total votes were cast in the election. A revised estimate could assume that whites cast 20 percent of the total vote with 80 percent going to Weik. However, that estimate would also be incorrect because it would mean that white voters cast 31,374 votes and Weik received 24,910 votes, but in fact that Weik received a total of 22,147 votes (see Table 2, above). EI continues to work iteratively, back and forth, through a computationally intensive process tentatively accepting, then

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[11] See Lau, Olivia, Ryan T. Moore, and Michael Kellerman. (2007) "eiPack: R x C Ecological Inference and Higher Dimension Data Management," R News 7:43-7.

rejecting various possibilities until it reaches a set of values for all three groups that make the results highly likely—highly likely in the sense that moving away from them to some other set of numbers flies in the face of one or another constraint.

32)   EI estimates as applied to candidate support in the 2015 Tax Receiver election indicate Latino voters gave 70.4 percent support to Castro (29.4 percent to Weik); non-Hispanic black voters gave 71.4 percent support to Castro (28.6 percent to Weik); and white voters gave 30.0 percent support to Castro (70.0 percent to Weik). While the estimated support for Castro among Latino voters and non-Hispanic black voters are 5 to 10 points different from the regression analysis estimates, EI analysis still reveals racial/ethnic polarized voting that is statistically significant. EI also reveals that Castro's defeat is due to white bloc voting against her (white voter cohesion in favor of her opponent, Weik).

33)   Like the regression estimates, EI provides 95 percent confidence intervals around the best estimate of voter support for each group. There is 95 percent confidence that support levels for Castro among Latinos, non-Hispanic blacks, and whites are in the following ranges.

a)   Latino support for Castro = 70.7-76.8 percent.

b)   Non-Hispanic black support for Castro = 75.7-82.7 percent.

c)   White support for Castro = 22.7-24.1 percent.

Here, as with the regression analysis, the low point of the interval for the Latino estimate, 70.7, is nowhere near the high level for whites, 24.1, indicating a statistically significant difference.

3.   Projection Analysis

34)   The reason to establish facts about group size, location, and racially polarized voting patterns in legal proceedings is to evaluate whether, as applied to Islip, (1) Latino voters

lack the opportunity to elect candidates of their choice via the Town's at-large system for electing Council members **and** (2) whether that missing opportunity would be available under a single-member district system. The illustrative analysis of the Town Receiver of Taxes election shows that Latino voters lacked the opportunity to elect Castro in Town-wide voting. The next question is whether it is reasonable to expect that Castro could have been elected under a system of single-member districts.

35) County Legislative District 9 is a majority Latino population area within Islip's boundaries. The estimated total population in LD9 in 2015 is approximately 86,000, among whom approximately 56,000 are Hispanic ($\approx$65%). Counting citizens of voting age for the same time frame, total CVAP is approximately 45,000, of whom just fewer than 20,000 are Hispanic ($\approx$45%). With approximately 336,000 Town residents in all, the 86,000 population count is roughly the size required when constructing one of four equipopulous single-member districts—i.e., 336,000 / 4 = 84,000.[12]

36) Castro's vote total in LD9 was 2,663 (64.4%); Weik received 1,471 votes (35.6%) from voters in LD9. Clearly, Castro would have won the election if the outcome had been determined by voters in just LD9. Therefore, while the Latino voters' candidate of choice, Castro, was easily defeated in the at-large election, there is substantial reason to believe that Castro would have prevailed in an election between these two candidates held in a single-member district similar to LD9.

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[12] The population and CVAP data are from Professor Beverage's Census-based estimates for the 2012-16 years. The vote counts are from the Suffolk County Board Elections electronic files delivered to Professor Beveridge and passed along to me.

37)   An alternative projection can be made using the hypothetical majority-Latino district drawn by plaintiffs' demographic expert, Andrew Beveridge.[13] Simple sums of votes for Castro and Weik in the EDs covered by his hypothetical district show Castro outpolling Weik, with 2,290 votes for Castro and 1,294 votes for Weik (Castro recieves 63.9% of the vote and Weik receives 36.1%). As was true for projections from LD9, there is substantial reason to believe that had an election between these two candidates been contested in a majority-Latino single-member district Castro, the Latino voters' candidate of choice, would have prevailed.

B.   Town Council Election: Vote-for-Two Illustration

        1.   Calculating Voter Support: Regression Analysis and Ecological Inference

38)   I next apply these methods of analysis to vote-for-two elections, such as those held to elect the Islip Town Council. In Town Council elections, voters at the polls may decide to cast two ballots for their two most preferred candidates; they might decide to single-shot vote by casting just one ballot and thus forgo expressing a second preference; or they might decide not to cast any ballots for Town Council. Given the varying possibilities, it is not possible to know how many individuals actively participated in a Council election by casting one or two ballots. Instead, it is possible to calculate the number of individuals who signed in intending to vote in some election on the ballot (Town Council or otherwise). As a consequence, percentages of support for a candidate in Council elections have to be calculated as votes received divided by voters at the polls.

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[13] The hypothetical district contains the following EDs: 3009, 3029, 3033, 3055, 3059, 3060, 3063, 3068, 3073, 3083, 3084, 3085, 3092, 3093, 3094, 3095, 3096, 3100, 3104, 3111, 3113, 3115, 3117, 3119, 3124, 3125, 3156, 3160, 3174, 3175, 3176, 3190, 3194, 3199, 3200, 3204, 3205, 3206, 3207, 3219, and 3226. The data of vote tallies received from the Suffolk County Board of Elections, and delivered to me through Andrew Beveridge, do not contain votes from EDs 3219 and 3226.

39)   To illustrate with an example, I examine the most recent Town Council election in 2017.
        The vote percentages reported in Table 1 (above) across all four candidates (Bergin
        Weichbrodt, O'Connor, Gonzalez, and Fenley) would have a sum of 200% if every Islip
        voter at the polls cast two ballots. The sum of the four percentages, however, is 172.6%
        $(51.3 + 47.9 + 37.1 + 36.3 = 172.6)$. This has two analytical consequences. First, the
        racially polarized voting analyses need to be conducted for each of the four candidates—
        i.e., unlike in the Tax Receiver election where performing the analysis for Castro is
        tantamount to conducting the same analysis for Weik because the results are
        complementary (70 percent support for one implies 30 percent support for the other).
        Second, voter participation rates must be calculated as voters at the polls as a percentage
        of citizen voting age population.

40)   Figure 2 displays in graphs the relationship between voter support for each 2017 Town
        Board candidate in relationship to the Latino CVAP percentage in various EDs. As in
        Figure 1, each dot represents an ED, and the red dots indicate EDs where the non-
        Hispanic black CVAP percentage is larger than the Latino CVAP percentage. It is
        visually apparent that vote support for Gonzalez and Fenley increases in correspondence
        to increases in Latino CVAP percentages. Likewise, vote support for Bergin Weichbrodt
        and O'Connor declines as the Latino CVAP percentage increases. Gonzalez and Fenley
        are the candidates of choice of Latino voters; Bergin-Weichbrodt and O'Connor are the
        candidates of choice of white voters.

Figure 2: Plots of Candidate Support by Race/Ethnicity in the 2017 Town Council Election
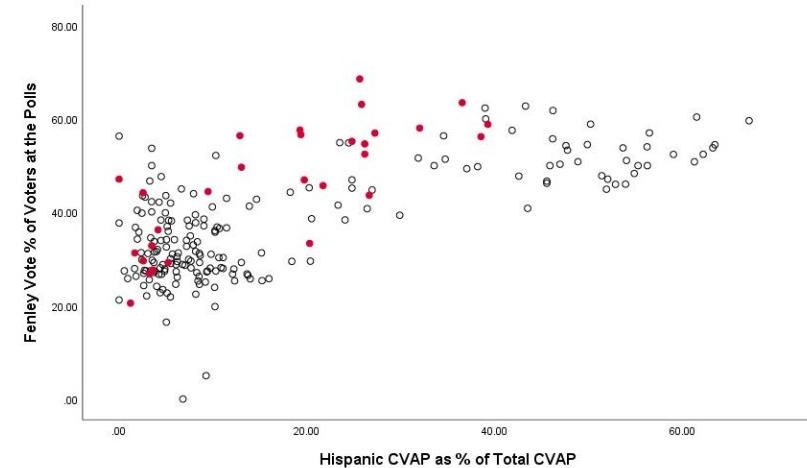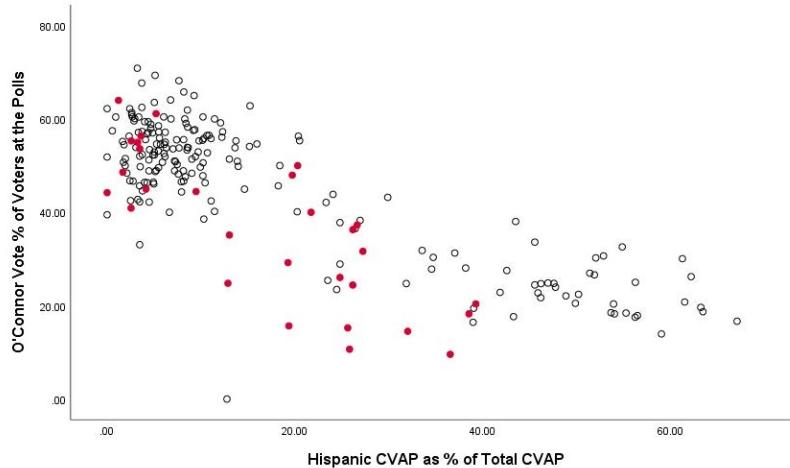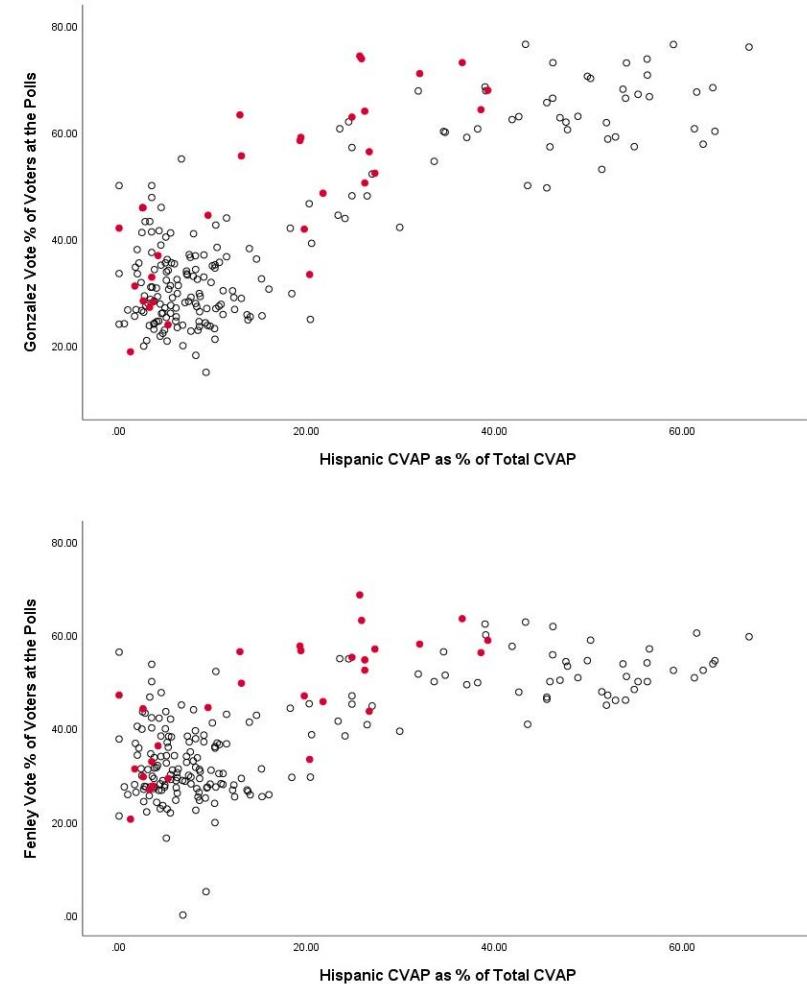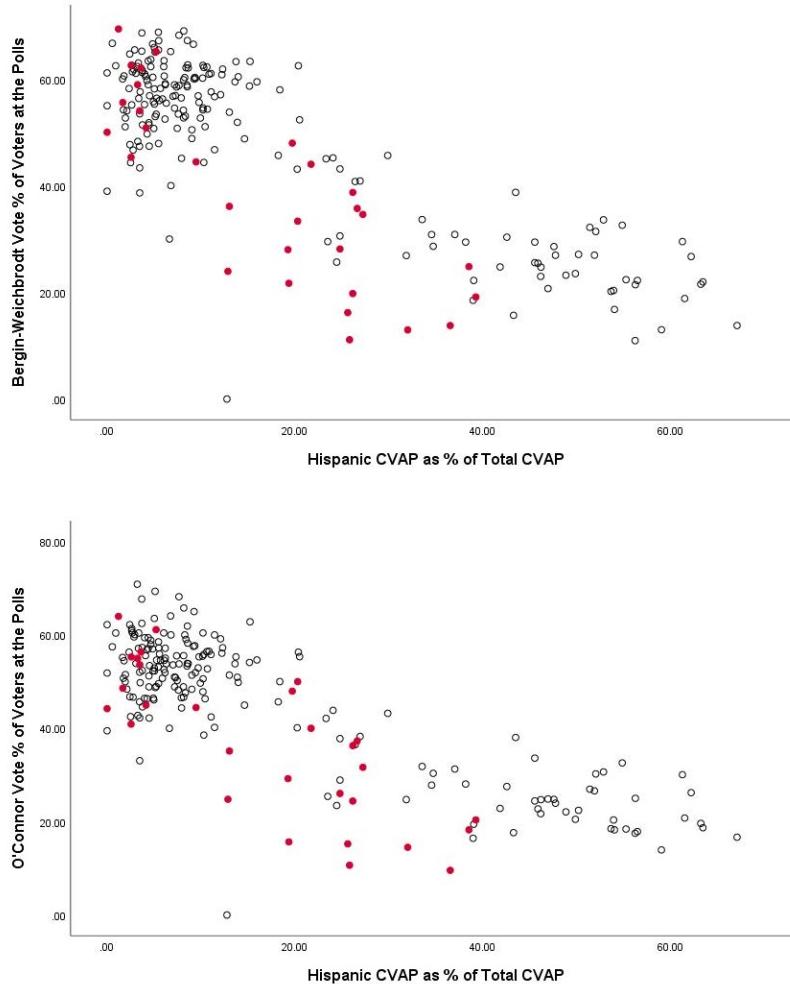
○ EDs where Latino CVAP is greater than non-Hispanic black CVAP

● EDs where non-Hispanic black CVAP is greater than Latino CVA

41)   The percentage of voter support estimates from regression for the four candidates, with their 95 percent confidence intervals adjacent in parentheses, are:

	Bergin Weichbrodt	O'Connor	Gonzalez	Fenley
Latino	15.2 (8.0_22.4)	15.6 (8.2_23.0)	74.0 (66.0_82.0)	52.7 (44.9_60.5)
Non-Hispanic Black	2.9 (-7.7_13.5)	3.5 (-7.1_14.1)	84.7 (73.1_96.3)	79.6 (69.2_90.0)
White	60.8 (59.6_62.0)	56.5 (55.3_57.7)	27.4 (26.0_28.8)	30.3 (28.9_31.7)

The differences between Latino and white support is statistically significant with respect to all four candidates.

42)   The percentage of voter support estimates from EI, with their 95 percent confidence intervals adjacent in parentheses, are:

	Bergin Weichbrodt	O'Connor	Gonzalez	Fenley
Latino	10.7 (9.2_12.2)	7.4 (5.4_8.9)	81.2 (79.0_84.3)	54.9 (52.4_57.3)
Non-Hispanic Black	11.7 (9.5_14.9)	17.8 (13.1_22.1)	75.0 (69.6_79.6)	74.3 (71.0_76.9)
White	60.5 (60.0_61.1)	56.4 (55.9_57.1)	27.0 (26.3_27.5)	30.4 (29.7_31.1)

Under both methods, Gonzalez and Fenley are the candidates of choice of Latino voters, by sizable margins. This is evident from a comparison of the estimated the Latino votes they received, about 52 to 75 percent of the Latino votes, with the estimated Latino votes received by the other two candidates, Bergin Weichbrodt and O'Connor, who received about 8 to 15 percent of Latino votes. White voters provided statistically significantly lower support of both Latino voters' candidates of choice.

2.   Estimating Turnout Rates

43)   Figure 3 displays the correspondence between turnout rates among EDs (vertical axis) in

relation to the Latino CVAP percentage (horizontal axis) for the recent 2017 Town

Council election. The rates are recorded as voter sign-ins as a percent of CVAP in an

ED. As before, EDs with more non-Hispanic black CVAP than Latino CVAP are

indicated with red dots.

44)   A notable substantive feature of the display is the disjunction in turnout rates in EDs with

greater or less than approximately 20 percent Latino CVAP. Among the predominantly

white EDs (which have less than 20 percent Latino CVAP), 89.7 percent of the overall

CVAP is white (129,050 white CVAP of the total 143,814 CVAP in these EDs). Board

of Elections data reports that, among these EDs, 50,603 people signed in at the polls.

That means the signs-in represent a turnout rate of 35.2 percent (50,603 of the 143,814

total CVAP residing in the EDs). This 35.2 percent is a rough estimate of the turnout rate

of white voters in the Town. Estimation for the remaining 17.1 percent of whites

depends on their level of turnout in all the remaining EDs—i.e., those above 20 percent

Latino CVAP.

45)   Regression can be used to estimate turnout rates, but the disjunction requires one or

another of several assumptions about the consistency of white turnout below and above

the Latino CVAP 20 percent mark. As a first step in my analysis, I anchored my

estimates by counting sign-ins with Latino and non-Latino surnames from a list of

registered voters that the Board of Elections recorded as signing in for the 2017 election.

Professor Beveridge processed the data in two alternative ways using the U.S. Census

Bureau list of Spanish surnames and reported the results to me. One method of counting

people with Spanish surnames is provided by Bureau of the Census. [14] The second, more recently developed method, comes from academic work by Bernard Grofman and Jennifer Garcia.[15] Dr. Beveridge's data can be found in **Exhibit 2** to this report.

46) The number of voters with Spanish surnames who signed in for the 2017 election is 3,705, or 8.9 percent of the 41,598 Latino estimated CVAP as of 2017. The Census Bureau has provided guidance that that this type of estimation of Latino voter turnout likely represents a minimum Latino voter turnout, with a reasonable variability somewhere between it and 1.5 times larger (1.5 times 8.9% is 13.3%).[16] The count of Spanish surname people signing in derived from using the Grofman-Garcia method is 4,688 or 11.3 percent. Therefore the anchor I sought for determining a reliable method of estimating turnout indicates a statistically based estimate for the 2017 Town Council election should have a Latino voter turnout value in the range of 8.9 to 13.3 percent, likely centered at or around 11 percent.

47) Because the EI estimates result in a Latino turnout estimate of 10.6 percent, with a confidence interval ranging from a low of 8.9 to a high of 12.8 the check through the Spanish surname counts provides confidence that EI-based turnout estimates are accurate.[17] Therefore, since the EI estimates results in a Latino turnout estimate close to

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[14] The Census Bureau evaluation of Spanish surnames is described in Word, David L. and R. Colby Perkins Jr. (1996) Building *a Spanish Surname List for the 1990s: A New Approach to an Old Problem* (Technical Working Paper #13). Population Division U.S. Bureau of the Census: Washington, DC.

[15] Grofman, Bernard and Jennifer R. Garcia. 2014. "Using Spanish Surname to estimate Hispanic Voting Population in Voting Rights Litigation: A Model of Context Effects Using Bayes' Theorem." *Election Law Journal* 13: 375-93.

[17] Turnout estimates using regression could apply a simple linear form of analysis, a neighborhood model calculation, or a double regression formulation, but they each produce unacceptable out of range estimations in this case. The neighborhood model, in this case and in other applications, runs into problems by assuming all differences are attributable to the neighborhood in which people reside. Here it indicates Latino turnout of 19.6 percent, too high for even the 13.8 percent upper bound of the Census-based estimates. The simple linear and double regression methods fail in this case largely because in an ordinary application they don't accommodate the discontinuity apparent in Figure 2. For details of those methods and descriptions of their associated assumptions, see Grofman,

the most secure benchmark one could estimate, I rely on EI as an accurate and reliable

estimation technique for turnout.

Bernard (1993) "The Use of Ecological Regression to Estimate Racial Bloc Voting," University of San Francisco Law Review 27:593-625).

Figure 3: Plot of Relationship between Voter Participation and Race/Ethnicity in the 2017 Town Council Elections
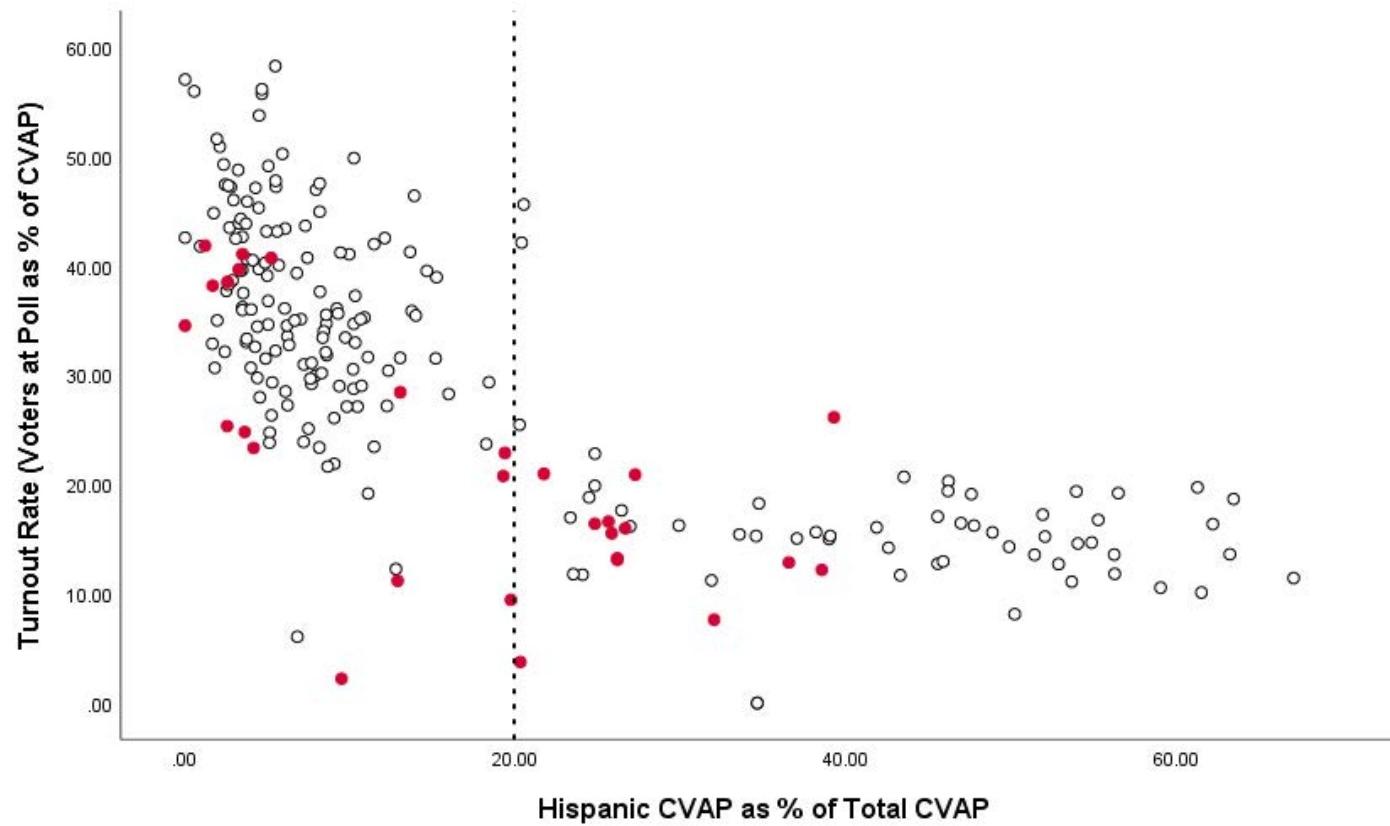
○ EDs where Latino CVAP is greater than non-Hispanic black CVAP

● EDs where non-Hispanic black CVAP is greater than Latino CVAP

*The plot excludes the ED 3085 (Fire Island). Voters signing in at that ED reported outnumber the total CVAP.

SECTION THREE: ENDOGENOUS ELECTION ANALYSIS: TOWN-WIDE OFFICES

A.   Town Council Elections

48)   Tables 6 and 7 report the results of the ethnically/racially polarized voting analyses in 8 Town Council elections, in which 16 council members were elected.[18] Table 6 shows the regression results;[19] Table 7 shows the EI results. Both forms of analysis point to the same conclusion: voting patterns in support for 15 of 16 candidates for Town Board are racially polarized. The only exception is 2007, when white voters all supported the same Town Board candidate (John Edwards).

49)   Aside from the 2007 election when both Town Council candidates of choice of Latino voters uncharacteristically received more than 40 percent support from white voters, and which followed on the heels of then-Town Supervisor McGowan's guilty pleas to bribery and corruption charges, white voters have tended to offer about 30 percent of their support to Latino candidates of choice.[20] Latino voters since 2005 have tended to provide about 60 percent support for their preferred candidates, with percentages rising above 60 percent when one of their candidates of choice was Latino (Gonzalez, Fidelia, and Ortiz). However, no Latino candidate has ever been elected to the Town Council. Latino voters have consistently voted cohesively in Islip Town Council elections since 2005 and, with the exception of 2007, have been unable to elect their candidates of choice.

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[18] It is proper to keep in mind that all candidate support percentages in both tables are votes received as percentages of voters at the polls, regardless of whether a voter cast a ballot in the Town Board election. Given the often large differences between Latino and non-Hispanic black voters giving support to one set of candidates, on the one hand, and white voters supporting different candidates on the other, the precise vote percentage base makes no important difference to the question of ethnically/racially polarized voting patterns.

[19] The 2009 analysis excludes two precincts (3717 and 3722) because the County's electoral data records an exceeding high number of people signing in but casting blank ballots—ED 3217 with 1494 ballots accessed (each sign-in receives 2 ballots in this vote-for-two situation) and 1257 left blank, and ED 3722 with 1160 sign-ins and 860 blank. In 2011, the same precincts show a few hundred accessed and 49 and 50 ballots left blank, respectively.

[20] Among other public reports, recounts of aspects of Supervisor McGowan's pleas can be found in the *New York Times* on-line archive. See, e.g., "Ín Memory of Peter McGowan". *New York Times*. (March 6, 2006).

Table 6: Regression Estimates of Vote Support, by Group, for Islip Town Council Candidates

Year	Candidate	Latino Candidate of Choice	Won Or Lost	Latino %	Latino 95%CI Lo/Hi	Black %	Black 95%CI Lo/Hi	White %	White 95%CI Lo/Hi
2017	Bergin-Weichbrodt (R)			15.2	8.0/22.4	2.9	-7.7/13.5	60.8	59.6/62.0
	O'Connor (R)			15.6	8.2/23.0	3.5	-7.1/14.1	56.5	55.3/57.7
	Gonzalez (D)	#	Lost	74.0	66.0/82.0	84.7	73.1/96.3	27.4	26.0/28.8
	Fenley (D)	#	Lost	52.7	44.9/60.5	79.6	69.2/90.0	30.3	28.9/31.7
2015	Cochrane (R)			15.4	7.2/23.6	14.1	2.3/24.9	63.6	62.0/65.4
	Mullen (R)			14.5	7.1/21.9	10.8	0.2/21.6	63.0	61.6/64.4
	McDermott (D)	#	Lost	60.2	53.0/67.6	76.8	66.0/87.6	29.5	28.1/30.9
	Pulitano (D)	#	Lost	61.5	53.9/69.1	60.7	49.7/71.7	28.5	27.1/29.9
2013	Flotteron (R)			21.9	13.5/30.3	15.4	2.6/28.2	65.6	64.6/66.6
	Bergin-Weichbrodt (R)			20.2	11.6/28.8	15.8	3.2/28.6	64.8	63.0/66.6
	Fidelia (D)	#	Lost	64.0	56.4/71.6	86.5	75.1/97.9	29.7	28.1/31.3
	Hafele (D)	#	Lost	56.4	48.2/64.6	81.4	69.2/93.6	31.5	29.9/33.1
2011	Cochrane (R)			18.4	11.0/25.8	7.8	-4.2/19.8	61.0	59.6/64.4
	Senft (R)			14.8	7.8/21.8	1.2	-10.5/12.8	61.7	60.3/63.1
	Parrington (D)	#	Lost	64.0	56.2/70.8	77.6	66.6/88.6	33.5	32.1/34.9
	Ortiz (D)	#	Lost	77.7	66.9/84.9	90.9	79.3/102.5	29.8	28.4/31.2
2009	Bergen (R)			24.6	14.8/34.4	19.6	4.2/34.8	62.7	60.3/64.1
	Flotteron (R)			20.2	10.8/29.6	20.1	5.3/34.9	57.7	56.3/59.1
	Bodkin (D)	#	Lost	57.1	46.9/67.2	66.7	50.5/82.9	35.9	34.3/37.5
	Morgo (D)	#	Lost	55.0	44.9/60.2	65.6	49.6/81.6	30.3	28.7/31.9
2007	Fenley (R)			26.0	19.4/32.6	6.3	-2.7/15.3	47.4	46.2/48.6
	Schettino (R)			20.8	14.2/27.4	6.3	-2.5/15.5	43.3	42.1/44.5
	Edwards (D)	#	Won	62.3	58.9/69.1	83.4	74.2/92.6	50.4	49.2/51.6
	Parrington (D)	#	Won	57.5	54.3/60.7	76.7	68.1/85.3	43.2	42.2/44.2
2005	Bodkin (R)			10.6	0.8/20.4	18.8	5.4/32.2	61.3	59.7/62.9
	Flotteron (R)			11.8	3.4/20.2	13.7	2.1/25.3	51.2	49.8/52.6
	Parrington (D)	#	Lost	54.7	47.5/61.9	71.1	61.5/80.7	35.8	34.6/37.0
	Alvarez (D)	#	Lost	58.3	51.1/65.5	68.6	58.6/78.6	23.8	22.6/24.0

Table 7: EI Estimates of Vote Support, by Group, for Islip Town Council Candidates

Year	Candidate	Latino Candidate of Choice	Won or Lost	Latino %	Latino CI Lo/Hi	Black %	Black CI Lo/Hi	White %	White CI Lo/Hi
2017	Bergin-Weichbrodt (R)			10.7	9.2/12.2	11.7	9.5/14.9	60.5	60.0/61.1
	O'Connor (R)			7.4	5.4/8.9	17.8	13.1/22.1	56.4	55.9/57.2
	Gonzalez (D)	#	Lost	81.6	79.0/84.3	75.0	69.6/79.6	27.0	26.3/27.5
	Fenley (D)	#	Lost	54.9	52.4/57.3	74.3	71.0/76.9	30.4	29.7/31.1
2015	Cochrane (R)			14.3	11.4/17.4	15.6	12.9/18.4	63.5	62.6/64.3
	Mullen (R)			10.0	6.9/13.0	20.0	16.1/26.1	62.9	62.3/63.4
	McDermott (D)	#	Lost	61.8	58.1/63.7	73.3	68.6/78.6	29.7	29.0/30.4
	Pulitano (D)	#	Lost	61.2	57.0/65.2	63.8	57.8/70.3	28.5	27.7/29.1
2013	Flotteron (R)			13.0	9.4/17.4	17.4	12.0/21.5	66.0	65.1/66.7
	Bergin-Weichbrodt (R)			12.9	9.6/16.5	19.2	16.0/22.3	64.6	63.7/65.4
	Fidelia (D)	#	Lost	67.4	63.0/71.8	82.3	76.9/86.8	29.1	28.3/29.8
	Hafele (D)	#	Lost	66.8	64.3/69.3	69.0	65.2/73.7	29.9	29.0/30.8
2011	Cochrane (R)			11.4	8.7/14.1	18.6	13.1/22.8	60.9	60.0/61.7
	Senft (R)			7.7	5.7/9.8	11.3	7.2/17.0	61.8	61.2/62.3
	Parrington (D)	#	Lost	69.3	66.9/71.5	70.0	66.0/74.9	33.4	32.8/34.1
	Ortiz (D)	#	Lost	88.8	86.5/91.5	76.6	65.6/75.6	29.9	29.5/30.4
2009	Bergen (R)			19.9	17.3/22.5	23.2	19.4/26.3	63.0	62.2/63.8
	Flotteron (R)			12.9	11.3/14.9	23.1	17.5/30.7	58.8	57.8/59.7
	Bodkin (D)	#	Lost	58.5	55.4/62.6	69.8	59.7/74.8	35.4	34.8/36.0
	Morgo (D)	#	Lost	53.9	49.8/56.7	68.8	64.5/73.9	30.4	29.7/31.3
2007	Fenley (R)			20.2	16.9/14.8	13.4	10.5/17.6	47.5	47.0/48.1
	Schettino (R)			17.3	14.8/20.0	10.2	7.5/13.8	43.5	43.0/44.0
	Edwards (D)	#	Won	67.7	65.0/70.4	77.5	72.9/82.7	49.9	49.3/50.6
	Parrington (D)	#	Won	63.6	59.7/66.7	68.3	63.1/75.9	43.1	42.6/43.8
2005	Bodkin (R)			13.5	10.6/16.7	17.2	13.0/20.9	59.5	59.9/59.0
	Flotteron (R)			12.2	8.1/15.3	12.8	9.6/16.4	50.1	49.5/50.8
	Parrington (D)	#	Lost	58.9	53.4/58.6	67.3	63.8/71.1	36.5	36.0/37.2
	Alvarez (D)	#	Lost	56.1	56.1/62.1	70.8	53.3/58.6	25.0	24.4/25.6

50)   Table 8 reports voter turnout rates (voters at the polls as a percentage of CVAP) for the

same Town Board elections. Latino turnout rates, consistently under 15 percent, are only

one-half to one-third the turnout rates of white voters. The low Latino turnout rates and

the large between-group differences are likely associated with a combination of Latinos'

lower socio-economic status, some matter of disengagement from Town politics, off-year

elections, and lack of motivation on the part of candidates and parties who sense

difficulty winning.[21]

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[21] *See, e.g.,* Gray, Virginia, (1976) "A Note on Competition and Turnout in American States." *Journal of Politics* 38: 153-58, at 153. Dr. Gray's paper finds that the relationship between low competition and low turnout is a relationship so fundamental that it borders on a law. Likewise, it is also accepted that turnout ebbs and flows with on-year and off-year elections. *See, e.g.*, Jacobson, Gary (2013) *The Politics of Congressional Elections* (Boston, MA: Pearson) at 121. On the role of mobilization see Rosenstone, Steven, J. and John Mark Hansen (1993) *Mobilization, Participation, and Democracy in America,* (New York, NY: Macmillan).

Table 8: Estimated Voter Participation by Group in Islip Town Council Elections*

Year	Latino Turnout %	Latino CI Lo/Hi	Non-Hspn Black Turnout %	Non-Hspn Black CI Lo/Hi	White Turnout %	White CI Lo/Hi
2017	10.6	8.9/12.8	14.2	11.6/17.6	31.9	31.4/32.2
2015	5.1	3.4/7.0	11.5	7.7/17.2	18.7	18.4/19.0
2013	8.0	5.5/10.3	8.1	5.6/11.9	20.0	19.7/20.4
2011	13.3	10.9/15.9	14.6	10.6/19.4	27.4	26.8/27.8
2009	6.1	4.4/8.6	11.9	7.3/16.1	20.7	20.2/21.1
2007	10.6	6.7/15.7	15.7	10.7/22.8	21.6	21.2/21.9
2005	8.9	6.8/11.7	15.2	12.0/18.2	20.5	20.1/20.7

*The 2009 analysis excludes two precincts (3717 and 3722) because the County's electoral data records an exceeding high number of people signing in but casting blank ballots—ED 3217 with 1494 ballots accessed (each sign-in receives 2 ballots in this vote-for-two situation) and 1257 left blank, and ED 3722 with 1160 sign-ins and 860 blank.

B.   Town-wide Vote-for-One Office Elections

51)   Table 9 reports the results of ethnically/racially polarized voting analyses for Town

Supervisor, Receiver of Taxes, and Clerk from 2005 through 2015. Eight of the nine

elections are polarized along ethnic/racial lines. Results from five of six elections in

2011 and 2015 show a degree of polarization even higher than the levels reported in

Table 6 for the Council elections.[22] The one exception to a racially polarized outcomes

came in the special circumstance of Supervisor Nolan's re-election one year after he

replaced Supervisor McGowan, who resigned in March 2006 in the wake of his guilty

plea.[23]

52)   Voting on the 2006 referendum to replace the Town's at-large election structure with

single-member districts is likely polarized, but it is uncertain. The best estimates have a

majority of Latino voters (and non-Hispanic black voters) supporting a change to a

system using single-member districts, but the margins of error around those estimates

leave room for doubt. Latino voters likely supported the change, but, if they did, their

votes were not cohesively in support of the proposition to conclude with statistical

confidence they offered majority support.

53)   Table 10 shows Latino voter participation for vote-for-one town-wide offices is low, as

was evident in the Council elections. Indeed, the vote-for-one election turnout

percentages are even lower, because the vote counts here are of votes cast whereas the

Council counts are of voters signing in. Inasmuch as turnout reflects behavior patterns

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[22] Some part of this greater degree can be attributed to calculating candidate support as a percentage of voters at the polls (Council) versus as a percentage of votes cast for a particular office.

[23] Scandals often carry a heavy political price. While upwards of 90 percent of congressional incumbents win re-election, those touched by any sort of scandal lose about 40 percent of the time, and corruption scandals carry the highest price. See Basinger, Scott J. (2013) "Scandals and Congressional Elections in the Post-Watergate Era." Political Research Quarterly 66:385-98.

associated with socio-economic status, political engagement in Town politics, enthusiasm for contributing to the election of one's candidate of choice, and effort on behalf of parties and candidates to produce that result. These considerations cut against Latino voter participation. It is notable, however, that in 2006 presidential midterm year, when a Latino candidate of choice stood good prospect of winning (and did win), the Latino participation rate stands about double off-year elections.

54) Whether there is a substantial consequence associated with these observed turnout differences depends on what they portend for the ability of Latino voters to elect their candidates of choice in a fairly drawn single-member district. That is, if the turnout rates indicate that even in a majority-Latino single member district would often foreclose the opportunity for Latino voters to elect candidates of their choice, the low rates could prove important. Projection analyses directly address issue.

Table 9: Estimated Vote Support, by Group, in Vote-for-One Islip Town Offices

Year	Office	Latino Candidate of Choice	Out-come	Regression			EI		
				Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi	Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi
2015	Supervisor	Licari (D)	Lost	67.6 59.6/75.6	80.3 68.5/92.1	29.3 28.1/30.5	70.4 65.8/72.7	71.4 67.5/76.3	30.0 29.3/30.9
	Tax Receiver	Castro (D)	Lost	75.4 68.0/82.6	79.9 69.3/90.5	22.7 21.5/23.9	73.7 70.7/76.8	78.9 75.7/82.7	23.5 22.7/24.1
	Clerk	Fidelia (D)	Lost	74.7 66.7/82.7	89.3 77.7/99.9	29.1 27.9/30.3	82.9 79.3/86.6	73.0 68.9/76.9	29.5 28.7/30.3
2011	Supervisor	Nolan (D)	Lost	78.6 70.6/86.6	98.1 85.1/111.1	41.0 39.6/42.4	90.7 87.9/92.7	75.4 71.0/79.9	40.9 40.2/41.5
	Tax Receiver	Rossi-Fontana D)	Lost	78.3 71.3/85.3	96.1 84.9/107.3	33.1 31.9/34.3	86.1 84.1/88.7	80.1 76.3/83.3	33.7 33.2/34.4
	Clerk	Fields (D)	Lost	76.3 69.3/83.3	95.3 83.9/106.7	39.4 38.2/40.6	87.7 84.8/90.2	78.9 74.1/82.6	39.0 38.4/39.7
2007	Supervisor	Nolan (D)	Won	77.4 70.4/84.4	95.2 85.8/104.6	65.6 64.6/66.6	84.2 81.6/87.6	87.5 82.0/91.7	65.1 64.7/65.7
	Tax Receiver	Slinkosky (D)	Won	64.1 56.9/71.3	84.8 75.2/94.4	39.9 38.9/40.9	68.5 64.8/72.0	81.7 77.8/86.3	39.7 39.1/40.3
2006	Supervisor	Nolan (D)	Won	77.7 70.8/83.5	79.4 70.6/88.2	43.6 42.6/44.6	77.3 74.7/79.7	87.4 81.8/92.8	48.1 47.7/48.7
Year	Issue	Prefer District							
2006	Districting Proposition	Vote = Yes	Lost	53.9 46.7/61.1	56.4 49.0/63.8	44.4 43.4/45.4	54.8 52.0/58.8	56.0 52.0/60.3	44.2 43.5/44.8

Table 10: Estimated Voter Participation by Group in 3 Vote-for One Town Elections

Year	Office	Latino Turnout %	Latino Confid-ence Interval Lo/Hi	Non-Hspn Black Turnout%	NHB Confid-ence Interval Lo/Hi	White Turnout %	White Confid-ence Interval Lo/Hi
2015	Supervisor	4.9	3.7/6.1	5.7	4.1/7.6	19.6	19.2/20.0
	Tax Receiver	5.6	4.7/6.8	4.4	3.3/5.6	19.2	18.8/19.5
	Clerk	4.2	3.0/5.7	7.7	5.6/10.0	18.3	17.9/18.7
2011	Supervisor	6.8	5.0/8.5	8.4	6.7/11.3	28.8	28.3/29.3
	Tax Receiver	5.7	3.6/8.2	9.1	7.1/11.5	27.4	26.7/28.0
	Clerk	4.6	3.4/5.9	9.1	6.1/12.6	27.7	27.3/28.2
2007	Supervisor	6.7	4.0/9.1	8.2	6.3/10.6	22.7	22.3/23.2
	Tax Receiver	5.2	4.1/6.3	7.9	5.4/11.4	21.6	21.1/22.0
2006	Supervisor	11.9	8.9/14.3	14.1	8.6/17.9	37.3	36.8/37.8
Year	Issue						
2006	Dist vs At-large Proposition	4.1	3.2/5.0	6.3	4.5/8.7	26.3	25.9/26.7

SECTION FOUR: PROJECTION ANALYSIS

55)   As explained above, projection analysis permits us to examine whether Latinos can elect

candidates of their choice to the Town Board under a single-member district system. As

previously noted, LD9 is a majority Latino single-member district wholly within the

Town. In Islip, the results of LD9 elections and whether Latino voters elected their

candidates of choice permit us to project what would happen in a Town Board election

under a fairly drawn single-member district. All that is needed is to know the candidate of

choice for Latino voters and a calculation of the actual votes for that candidate and her or

his opponent among the EDs contained in LD9.

56)   For example, in the 2017 Town Council election, aggregating the votes from LD9 for the

four candidates as a check on their prospects for winning an election in a single-member

district shows both Latino voters' candidates of choice would have considerably

outperformed both of their chief opponents:

Candidate	Vote Tallies
Gonzalez	4,396
Fenley	3,614
Bergin Weichbrodt	1,599
O'Connor	1,552

57)   I also performed the same sort of projection analysis using Professor Beveridge's

hypothetical majority-Latino district.[24] This analysis leads to the vote tallies of:

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[24] The hypothetical district contains the following EDs: 3009, 3029, 3033, 3055, 3059, 3060, 3063, 3068, 3073, 3083, 3084, 3085, 3092, 3093, 3094, 3095, 3096, 3100, 3104, 3111, 3113, 3115, 3117, 3119, 3124, 3125, 3156, 3160, 3174, 3175, 3176, 3190, 3194, 3199, 3200, 3204, 3205, 3206, 3207, 3219, and 3226. The data of vote tallies received from the Suffolk County Board of Elections, and delivered to me through Andrew Beveridge, do not contain votes from EDs 3219 and 3226.

Candidate	Vote Tallies
Gonzalez	3,899
Fenley	3,179
Bergin Weichbrodt	1,395
O'Connor	1,351

58) Running in the Town's at-large, vote-for-two election, the candidates of choice of Latino voters lost their bids for council office. Running in a single-member district similar to LD9 or in the hypothetical district draw by Professor Beveridge, however, I project that Gonzalez and Fenley would have won easily. In short, the use of the at-large system impaired the ability of Latino voters to elect their candidate of choice compared to what reasonably can be expected to have resulted were the election conducted using a single-member district system in which these same candidates were elected by voters making up LD9.

59) Since 2005, three county LD9 elections have been contested:

2013 primary election:	Martinez (D) vs. Montano (WF)
2015 primary election:	Mata (D) vs. Martinez (WF)
2017 general election:	Martinez (D) vs. King (R)

Martinez, whether running on the Democratic or Working Families party line, was the preferred candidate of Latino voters in each election from 2013-17.[25] In LD9, which is majority Latino, Latino voters' candidate of choice prevailed in all contested elections.

60) Tables 11 through 15 report tallies of LD9 voters for all 45 elections previously presented and discussed in this report to demonstrate how candidates of choice of Latino voters would have fared in elections limited only to LD9. The 45 elections contain 52

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[25] None of these elections were ethnically or racially polarized. Latino and white voters in this area of the Town both supported the winning candidate in all three elections.

candidates (38 vote-for-one results and the 14 in the 7 vote-for two council elections).

All 52 Latino voters' candidates of choice are projected winners by vote counts of Islip

voters residing in LD9. These projections show Latino voters are highly likely to be able

to elect their candidate of choice in a similarly drawn single-member district in the Town.

61)   The 45 elections choose 52 candidates (38 vote-for-one results and the 14 in the 7 vote-

for two council elections). All 52 Latino voters' candidates of choice are projected

winners by vote counts of Islip voters residing in LD9.   And, while there is statistical

uncertainty about the Latino majority preference for switching from an at-large to single-

member district format, 51 percent of the voters in LD9 preferred to switch. However

one chooses to consider the ballot proposition result, projections show Latino voters have

great likelihood of being able to elect their candidate of choice in a legally established

single-member district within the town borders.

62)   Table 16 reports vote tallies in Dr. Beveridge's hypothetical Latino-majority districts for

the 2013, 2015, and 2017 Town elections. In the three vote-for-two Town Council

elections—2013, 2015, and 2017—all six candidates of choice of Latino voters are

projected as winning candidates, while all six were defeated while contesting the

elections at-large. As well, all three Latino voters' candidates of choice for Supervisor,

Receiver of Taxes, and Clerk are projected to have easily prevailed against their

opponents in the three elections involving vote-for-one Town offices. As in the existing

legally established single-member district of LD9, Latino voters have great likelihood of

being able to elect their candidate of choice in the hypothetical single-member district

constructed as an example by Professor Beveridge.

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Table 11: Projected Vote Support for Town Council Candidates within County LD9, 2003-17

Year	Candidate	Latino Candidate of Choice	Projected Win/Loss LD 9	Votes Latino CoC	Votes not Latino CoC
2017	Bergin-Weichbrodt (R)				1599
	O'Connor (R)				1552
	Gonzalez (D)	#	Win	4396	
	Fenley (D)	#	Win	3614	
2015	Cochrane (R)				1204
	Mullen (R)				1155
	McDermott (D)	#	Win	2695	
	Pulitano (D)	#	Win	2507	
2013	Flotteron (R)				1365
	Bergin-Weichbrodt (R)				1286
	Fidelia (D)	#	Win	2977	
	Hafele (D)	#	Win	2727	
2011	Cochrane (R)				2009
	Senft (R)				1841
	Parrington (D)	#	Win	4205	
	Ortiz (D)	#	Win	4809	
2009	Bergin (R)				1640
	Flotteron (R)				1479
	Bodkin (D)	#	Win	2520	
	Morgo (D)	#	Win	2367	
2007	Fenley (R)				1866
	Schettino (R)				1645
	Edwards (D)	#	Win	3936	
	Parrington (D)	#	Win	3569	
2005	Bodkin (R)				1966
	Flotteron (R)				1648
	Parrington (D)	#	Win	3075	
	Alvarez (D)	#	Win	2837	

Table 12: Projected Vote Support for Latino Voters' Outcomes of Choice within LD9, Town-wide Elections 2003-15

Year	Office	Latino Candidate of Choice	Projected Win/Loss LD 9	Vote %
2015	Supervisor	Licari (D)	Win	63.0
	Tax Receiver	Castro (D)	Win	64.4
	Clerk	Fidelia (D)	Win	68.7
2011	Supervisor	Nolan (D)	Win	71.7
	Tax Receiver	RossiFontana (D)	Win	69.1
	Clerk	Fields (D)	Win	69.6
2007	Supervisor	Nolan (D)	Win	77.4
	Tax Receiver	Slinkosky	Win	59.9
	Clerk	*cross-party endorsement*	~~~	~~~
2006	Supervisor	Nolan (D)	Win	65.0
Year	**Issue**	**Prefer At-Large**		**Total**
2006	Dist vs At-large Proposition	Vote = Yes	Win	51.0

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Table 13: Projected Vote Support for Latino Voters' Candidates of Choice in LD9, Countywide Offices 2003-17

Year	Office	Latino Candidate of Choice	Projected Win/Loss LD 9	Vote %
2017	County DA	Sini	Win	82.2
	County Sherriff	Toulon	Win	76.7
2015	County Exec	Bellone	Win	78.3
2014	County Comptroller	Gaughran	Win	74.9
2011	County Exec	Bellone	Win	72.7
2006	County Clerk	Viloria-Fisher	Win	64.6
2005	County Sherriff	DeMarco	Win	62.2
	County Treasurer	Crespo	Win	50.1

Table 14: Projected Vote Support for Latino Voters' Candidates of Choice in LD9, Statewide Offices 2003-17

Year	Office	Latino Candidate of Choice	Projected Win/Loss LD 9	Vote %
2014	Governor	Cuomo	Win	75.4
	Atty General	Schneiderman	Win	84.4
	Comptroller	Dinapoli	Win	77.6
2010	Governor	Cuomo	Win	78.7
	Atty General	Schneiderman	Win	72.1
	Comptroller	Dinapoli	Win	70.9
2006	Governor	Spitzer	Win	75.5
	Atty General	Cuomo	Win	63.9
	Comptroller	Hevesi	Win	68.7

Table 15: Projected Vote Support for Latino Voters' Candidates of Choice in County LD9, National Offices 2003-17

Year	Office	Latino Candidate of Choice	Projected Win/Loss LD 9	Vote %
2016	President	Clinton	Win	77.6
	U.S. House CD #2***	DuWayne	Win	75.2
	U.S. Senate	Schumer	Win	83.7
2014	U.S. House CD #2***	Mather	Win	66.6
2012	President	Obama	Win	81.0
	U.S. House CD #2***	Falcone	Win	76.2
	U.S. Senate	Gillibrand	Win	84.6
2010	U.S. Senate A	Schumer	Win	79.9
	U.S. Senate B	Gillibrand	Win	75.4
2008	President	Obama	Win	77.2
2006	U.S. Senate	Clinton	Win	76.0
***CD #2 does not include about a dozen of the Town's EDs				

12.

Table 16: Vote Support for Town Office Candidates within a Hypothetical
Latino-Majority Single-Member District, 2013-17*

Year	Candidate	Latino Candidate of Choice	Projected Win/Loss LD 9	Votes Latino CoC	Votes not Latino CoC
2017	Bergin-Weichbrodt (R)				1599
	O'Connor (R)				1552
	Gonzalez (D)	#	Win	4396	
	Fenley (D)	#	Win	3614	
2015	Cochrane (R)				1204
	Mullen (R)				1155
	McDermott (D)	#	Win	2695	
	Pulitano (D)	#	Win	2507	
2013	Flotteron (R)				1365
	Bergin-Weichbrodt (R)				1286
	Fidelia (D)	#	Win	2977	
	Hafele (D)	#	Win	2727	

	Town Office	Latino Candidate of Choice	Projected Win/Loss	Vote %	
2015	Supervisor	Licari	Win	61.6 %	
	Tax Receiver	Castro	Win	63.9 %	
	Clerk	Fedelia	Win	67.2 %	

*The hypothetical district contains the following EDs: 3009, 3029, 3033, 3055, 3059, 3060, 3063, 3068, 3073, 3083, 3084, 3085, 3092, 3093, 3094, 3095, 3096, 3100, 3104, 3111, 3113, 3115, 3117, 3119, 3124, 3125, 3156, 3160, 3174, 3175, 3176, 3190, 3194, 3199, 3200, 3204, 3205, 3206, 3207, 3219, and 3226. The data on vote tallies received from the Suffolk County Board of Elections, and delivered to me through Andrew Beveridge, do not contain votes from EDs 3219 and 3226.

SECTION FIVE: EXOGENOUS ELECTION ANALYSIS

63)   Elections for Town office hold the most weight in racially polarized voting analysis

because they speak directly to preferences for representation in the jurisdiction and for

the offices in question. Town elections also involve candidates groomed and recruited in

the politics of Islip, in contrast to, for example, candidates from elsewhere in Suffolk

County in county elections, New York State in state or some federal elections, or the

United States overall in the case of presidential elections. Exogenous elections at the

county, state, and federal level are still, however, persuasive evidence of further racial

polarization.

64)   Polarized voting patterns between Islip's Latino and non-Hispanic black voters, on the

one hand, and white voters, on the other, generally persist in exogenous elections. Tables

17, 18, and 19 show patterns of ethnically/racially polarized voting in 7 of 8 Suffolk

County elections, 7 of 9 elections for statewide offices, and 7 of 11 of elections for

national offices. In the polarized exogenous elections, white voter support for Latino

voters' candidates of choice is somewhat higher than in the Town Council elections, at an

average of 35-45% compared to about 30%, respectively. If levels of white voter support

for Latino preferred candidates reached above 45 percent, as they do in some exogenous

elections, Latino preferred candidates in Council elections would stand a reasonable

chance of election. However, this has not been shown to actually occur in Town Council

or other Town-level elections.

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Table 17: Islip Voters' Estimated Vote Support for Candidates for County Offices, by Group

Year	Office	Latino Candidate of Choice	Regression			EI		
			Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi	Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi
2017	County DA	Sini	91.0 86.0/96.0	94.9 87.1/102.7	55.9 55.1/56.7	93.4 92.2/94.6	91.7 90.2/93.3	57.3 56.8/47.7
	County Sherriff	Toulon	73.3 65.5/81.1	75.2 64.8/85.6	45.0 43.8/46.2	91.7 90.1/93.4	89.8 85.2/93.2	40.5 39.9/41.2
2015	County Exec	Bellone	83.7 76.1/91.3	93.1 81.5/104.7	47.3 46.1/48.5	87.6 85.8/90.0	84.4 81.7/88.1	47.5 46.8/48.1
2014	County Comptroller	Gaughran	83.3 77.3/89.3	102.6 93.6/111.6	35.0 33.8/36.2	94.6 92.7/96.3	87.7 81.9/91.5	42.6 41.6/43.6
2011	County Exec	Bellone	77.8 71.6/84.0	92.3 82.1/102.5	46.6 45.6/47.6	89.4 86.3/92.7	73.2 67.3/77.5	46.4 45.8/47.3
2006	County Clerk	Viloria-Fisher	77.3 71.1//83.5	85.6 77.2/95.0	39.0 38.0/40.0	76.4 73.3/79.3	87.2 84.7/90.7	39.5 39.0/40.0
2005	County Sherriff	DeMarco	85.9 79.7/93.1	101.0 91.4/110.6	39.2 38.2/40.2	74.3 70.9/76.9	75.5 70.8/81.1	45.4 44.8/46.0
	County Treasurer	Crespo	63.0 54.6/71.4	64.7 53.5/75.9	27.0 25.8/28.2	67.4 64.3/70.9	60.9 58.3/64.3	28.4 27.8/29.0

Table 18: Islip Voters' Estimated Vote Support for Candidates for Statewide Office, by Group

Year	Office	Latino Candidate of Choice	Regression			EI		
			Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/HI	Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi
2014	Governor	Cuomo	85.5 80.1/90.9	98.6 90.4/106.8	34.6 343.6/35.6	92.6 90.7/94.5	90.8 88.6/93.5	37.4 36.9/37.9
	Atty General	Schneiderman	82.0 75.8/88.2	98.5 89.1/107.9	36.2 35.2/37.2	90.4 87.6/92.3	90.9 87.6/94.4	37.6 37.0/38.3
	Comptroller	Dinapoli	85.3 79.3/91.3	99.8 92.0/107.6	41.0 40.0/42.0	94.6 92.7/96.3	87.7 81.9/91.5	42.6 41.6/43.6
2010	Governor	Cuomo	86.5 81.5/91.5	98.9 91.1/106.7	49.5 48.5/50.5	92.3 91.1/93.4	94.5 92.3/96.3	51.9 51.4/52.3
	Atty General	Schneiderman	83.7 77.9/89.5	98.8 90.0/107.6	34.5 33.5/35.5	91.0 89.6/92.5	88.3 84.3/91.3	35.1 34.6/35.6
	Comptroller	Dinapoli	80.7 75.1/86.3	96.8 88.0/105.6	35.2 34.2/36.2	90.4 88.2/92.5	85.8 82.8/89.1	36.2 35.7/36.8
2006	Governor	Spitzer	85.0 79.2/90.8	88.7 81.3/96.1	58.4 57.6/59.2	90.3 88.2/91.9	91.4 89.1/93.7	58.8 58.2/59.3
	Atty General	Cuomo	73.4 68.0/78.8	83.7 76.7/90.7	42.1 41.3/42.9	76.0 73.8/78.9	88.5 84.6/92.5	42.6 42.1/43.1
	Comptroller	Hevesi	81.1 74.9/87.3	87.3 79.3/95.3	45.0 44.2/45.8	88.1 85.3/91.1	88.2 84.9/91.3	46.7 46.0/47.2

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Table 19: Islip Voters' Estimated Vote Support for Candidates for National Office, by Group

Year	Office	Latino Candidate of Choice	Regression			EI		
			Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi	Latino Vote% with CI Lo/Hi	NHB Vote% with CI Lo/Hi	White Vote% with CI Lo/Hi
2016	President	Clinton	92.3 86.7/97.9	99.3 91.1/107.5	30.8 29.8/31.8	94.4 92.6/96.3	94.3 92.2/95.8	33.7 33.2/34.3
	U.S. House CD #2***	DuWayne	91.6 85.8/97.4	99.5 90.9/108.1	24.4 23.2/25.6	94.4 92.7/96.1	90.0 87.3/92.7	25.4 24.7/26.2
	U.S. Senate	Schumer	93.8 89.2/98.4	98.6 91.8/105.4	51.7 50.7/52.7	96.0 94.6/97.2	93.0 91.1/94.5	53.7 53.3/54.1
2014	U.S. House CD #2***	Mather	75.6 68.8/82.4	95.8 85.8/105.8	19.4 18.2/20.6	83.4 80.4/85.8	86.2 82.8/88.5	20.0 19.4/20.8
2012	President	Obama	95.5 90.3/100.7	107.2 98.8/115.6	39.2 38.2/40.2	96.1 94.8/97.3	95.0 93.4/96.6	41.7 41.2/42.3
	U.S. House CD #2***	Falcone	92.6 86.8/98.2	104.1 95.1/113.1	29.2 28.0/30.4	95.1 93.9/96.5	92.2 89.1/94.5	30.4 30.0/30.8
	U.S. Senate	Gillibrand	95.1 90.5/99.7	102.6 95.0/110.5	55.1 54.1/56.1	96.1 94.9/97.2	94.1 92.1/96.0	57.1 56.6/57.6
2010	U.S. Senate A	Schumer	87.7 82.3/93.1	102.1 93.7/110.5	50.2 49.2/51.2	92.9 90.2/94.7	92.2 89.0/94.1	51.3 50.8/51.9
	U.S. Senate B	Gillibrand	83.3 77.5/88.8	100.2 91.2/109.2	43.9 42.9/44.9	91.2 89.0/93.1	91.0 87.7/93.3	45.0 44.5/45.5
2008	President	Obama	94.1 89.5/98.7	98.2 91.2/105.2	41.5 40.5/42.5	95.8 94.6/97.0	92.9 90.7/94.9	42.7 42.3/43.2
2006	U.S. Senate	Clinton	86.2 80.6/91.8	97.0 89.6/104.4	52.5 51.7/53.3	91.0 89.0/93.5	93.0 90.6/95.2	53.8 53.4/54.4
	***CD #2 does not include about a dozen of the Town's EDs							

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65)   The results of voter participation in these exogenous elections are reported in Tables 20, 21, and 22. Turnout in the exogenous elections ebbs and flows depending on whether they are presidential, national midterm, or off-year (i.e., odd-numbered). In presidential election years, Latino participation is in the mid-40 percent range; in presidential midterm years it ranges from high single digits to low teens, and in off-year elections it tends to be in the vicinity of 5 percent. White voter participation also ebbs and flows in similar ways, increasing in presidential election years and decreasing in off-year elections.

Table 20: Estimated Islip Voter Participation, by Group, in Election to County Office

Year	Office	Latino Turnout %	Latino Confid-ence Interval Lo/Hi	Non-Hspn Black Turnout%	NHB Confid-ence Interval Lo/Hi	White Turnout %	White Confid-ence Interval Lo/Hi
2017	County DA	5.1	4.2/6.5	8.3	5.6/11.4	33.1	33.7/34.6
	County Sherriff	4.9	3.4/6.4	8.8	6.5/11.2	33.1	32.7/33.4
2015	County Executive	4.6	3.1/6.6	6.5	4.0/9.7	19.5	19.2/19.9
2014	County Comptroller	8.3	6.6/10.5	17.6	14.2/20.5	34.0	33.5/34.5
2011	County Exec	5.7	4.2/7.3	11.3	8.5/13.6	28.9	28.3/29.5
2006	County Clerk	12.9	9.3/17.2	10.7	7.2/15.6	34.3	33.7/34.8
2005	County Sherriff	5.7	4.6/6.8	5.6	4.3/7.6	20.5	20.2/20.9
	County Treasurer	5.3	3.7/7.1	7.1	4.6/9.5	20.1	19.7/20.7

Table 21: Estimated Islip Voter Participation, by Group, in Elections to State Office

Year	Office	Latino Turnout %	Latino Confid-ence Interval Lo/Hi	Non-Hspn Black Turnout%	NHB Confid-ence Interval Lo/Hi	White Turnout %	White Confid-ence Interval Lo/Hi
2014	Governor	9.6	7.8/11.0	14.3	10.9/18.2	34.3	33.8/34.8
	Atty General	8.6	6.8/11.9	11.8	9.4/13.8	34.5	33.9/35.0
	Comptroller	8.3	6.6/10.5	17.6	14.2/20.5	34.0	33.5/34.5
2010	Governor	15.2	11.9/18.5	17.3	14.0/22.9	42.2	41.3/43.0
	Atty General	14.0	11.8/15.9	15.8	12.0/20.7	40.4	39.9/41.0
	Comptroller	12.8	8.1/16.7	21.5	15.4/27.5	40.5	40.0/41.1
2006	Governor	13.5	10.7/16.7	12.9	9.4/15.7	37.3	36.7/38.0
	Atty General	9.1	6.3/11.8	19.0	15.7/22.6	37.2	36.7/37.7
	Comptroller	7.8	6.2/9.9	16.8	12.8/20.1	35.4	34.6/35.9

Table 22: Estimated Islip Voter Participation, by Group, in Election to National Office

Year	Office	Latino Turnout %	Latino Confid-ence Interval Lo/Hi	Non-Hspn Black Turnout%	NHB Confid-ence Interval Lo/Hi	White Turnout %	White Confid-ence Interval Lo/Hi
2016	President	45.5	40.4/49.2	25.8	18.3/37.5	71.6	71.0/72.3
	U.S. House	35.3	39.5/39.6	27.3	19.9/35.3	67.1	66.3/67.7
	U.S. Senate	37.4	31.9/41.6	30.5	26.1/35.6	68.7	67.7/69.7
2014	U.S. House	6.0	4.5/7.2	16.8	14.4/19.9	34.2	33.6/34.7
2012	President	44.2	41.8/46.6	38.9	34.1/44.4	74.9	73.8/75.6
	U.S. House	38.2	34.3/40.8	23.5	20.5/30.2	64.9	64.2/65.7
	U.S. Senate	44.6	42.7/47.4	22.7	18.1/30.8	71.1	69.4/72.0
2010	U.S. Senate (Schumer)	13.3	11.1/15.2	20.1	16.7/24.7	41.7	41.2/42.1
	U.S. Senate (Gillibrand)	13.7	12.2/15.4	13.8	11.3/16.0	40.8	40.2/41.2
2008	President	44.0	41.7/46.5	33.2	29.1/36.6	68.6	68.0/69.2
2006	U.S. Senate	13.8	11.4/16.1	16.2	13.0/19.2	37.2	36.6/37.7

SECTION SIX: CONCLUSION

66) Elections at all levels show persistent patterns of ethnically/racially polarized voting among voters in Islip, in which white candidates and Latino candidates votes as distinct blocs. The persistence is most pronounced in Town Council elections. In Town Council elections, white crossover voting provided non-polarized support for Latino candidates of choice in just one of 16 candidacies in the last decade (John Edwards in 2007). There are only 9 out of 51 elections in which ethnically/racially polarized patterns do not appear, all of which are exogenous elections. Racial polarization was most often absent when a relatively unknown Republican candidate contested a New York statewide election for U.S. Senate or Governor. The more local the position or closer the office to Town governance, the clearer is the persistent pattern of ethnic/racial polarization.

67) The at-large voting structure impairs Latino voters' candidates of choice from getting elected to the Town Council. White voters' bloc voting consistently defeats the Latino voters' candidates of choice from being elected to the Town Council. Were the Town to elect its Council using a single member district system, and a district with borders similar to LD9 were drawn, the evidence shows through both EI and regression analysis that Latino voters could elect candidates of their choice to the Town Board.

68) Democratic principles hold that a voting majority find majority representation in an elected council. So it is in the Town of Islip; white voters have persistently elected a majority of the Town's council members. Democratic principles also give due consideration to the legitimate interests in fair and effective representation, consideration that calls for abiding by not just a preference for majority representation of majority preferences but also for equality among voters to ensure that significant minority voices are heard. At-large elections, more especially those with enhancing factors such as a

designated post, a small council size, and off-year voting, can silence minority voices.

Those conditions are present in Islip.

Respectfully submitted,
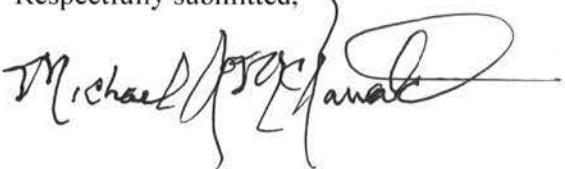
Dr. Michael D. McDonald

March 1, 2019

Exhibit 1

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Degrees

B.A. Wilkes College, Political Science, 1972
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Academic Positions

1986 -   Assistant Professor / Associate Professor / Professor
     Department Chair (1999-02, 2003-06)
     Director of Graduate Studies (1990-95, 1997-99)
     Director, Global & International Affairs Dual Diploma Program (2003-)
    Department of Political Science, Binghamton University

2006 -   Director, Center on Democratic Performance

2008-2012 Assistant Editor
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2005 (spring) International Fellow
    Department of Political Science, Free University Amsterdam

2002-2003 Research Fellow
    Department of Government, University of Essex

1995-1996 Research Fellow
    Netherlands Institute for Advanced Study
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1977-1986 Assistant / Associate Professor
    Department of Political Science
    University of New Orleans

TEACHING & RESEARCH INTERESTS

- Representation and Democracy
- Electoral Systems
- Congressional Elections
- Research Methodology
- Data Analysis and Statistics

PUBLICATIONS

Books

McDonald, Michael D. and Ian Budge. 2005. *Elections, Parties, Democracy: Conferring the Median Mandate*. Oxford, UK: Oxford University Press.

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EXTERNAL & SUPPORTED RESEARCH

- ❖ Data preparation, analysis, and, when required, expert witness testimony in federal district courts in litigation filed under the 1982 amended section 2 Voting Rights Act. Supporting agent/agency and the respective jurisdiction include:

  - Lawyers' Committee for Civil Rights under Law, Norfolk, VA.
  - Center for Constitutional Rights, New York City, NY.
  - New York City Civil Liberties Union, Yonkers, NY.
  - David M. Lipman, Attorney, Sarasota, FL.
  - East Arkansas Legal Services, Blytheville, AK.
  - McTeer and Bailey, Attorneys, Washington County, MS.
  - Jacobs, Jernigan, & Weiner, Attorneys, Gretna, LA.
  - NAACP Legal Defense Fund, State of Arkansas.
  - East Arkansas Legal Services and Lawyers' Committee for Civil
       Rights Under Law, Marianna, AK.
  - East Arkansas Legal Services and Lawyers' Committee for Civil
       Rights Under Law, Lee County, AK.
  - NAACP Special Contribution Fund, Niagara Falls, NY.
  - Center for Constitutional Rights, New York City, NY and
       McTeer and Bailey, Attorneys, Hempstead, NY.
  - Illinois Republican Party, State of Illinois
  - Connecticut Civil Liberties Union, Bridgeport CT
  - Albany County, New York
  - MALDEF, Lake County, Illinois

- ❖ Analysis of New York State spending on Medicaid for the purposes of identifying the program categories in which New York had been overspending relative to other states. Funding through New York State Department of Social Services Division of Medical Assistance, Thomas Fanning, Director of Management Reports.

- ❖ Analysis of pathways into the construction-contracting business. Funding from New York State, Governor's Office for Minority and Women's Business Development.

- ❖ Creation of a single-member district electoral plan for Sullivan County Board of Supervisors. Funding from Sullivan County—Elton Harris, Chairman of Optional Government Committee, and Harvey Smith, Sullivan County Office of General Services.

- ❖ Analysis of the State of New York's property tax equalization rate for the City of Elmira. Funding from City of Elmira—John Burin, Assessor.

- ❖ Creation of a districting plan for the Illinois Assembly and Senate, post-1990 census. Funding from the Illinois Republican Party.

- ❖ Evaluation of congressional district plans for the State of Texas following the 2000 census. Funding from the Texas Democratic Party congressional delegation.

- ❖ Consultant on proposed districting plans for the Illinois Assembly and Senate, post-2000 census. Funding from the Illinois Republican Party.

- ❖ Program evaluator of Broome County Family Dependency (Drug) Treatment Court. Funding from the U.S. Department of Justice.
- ❖ Editorial consultant and contributor for select European entries in the *Political Handbook of the World*. Funding from the publishers: (1) Congressional Quarterly & (2) Sage.
- ❖ Data preparation, analysis, and expert witness preparation for civil rights plaintiffs in <u>Boone v. Nassau County</u> (2011) federal district court, in litigation filed under the 1982 amended section 2 Voting Rights Act.
- ❖ Develop and prepare measurement reliability estimations for manifesto research project. Funding, in conjunction with Ian Budge, Nuffield College Foundation.
- ❖ Amicus submission in <u>Personhuballah v. Alcorn</u>¸ re: Virginia congressional districting remedy.
- ❖ Amicus submission in <u>Gill v. Whitford</u>¸ re: Wisconsin State Assembly redistricting.

OTHER PROFESSIONAL ACTIVITIES

Presentations at Professional Conferences

Paper presentations at 38 professional conferences: American Political Science Association (1979, 1982, 1985, 1990, 1996, 1998, and 2000, 2005, 2006, 2007, 2009, 2014, 2015), American Society for Criminology (2000), Centenary Congress of the Australian and New Zealand Association for the Advancement of Science (1988), Center for Legal Studies on Intergovernmental Relations (1985), Citadel Conference on Southern Politics (1984), European Consortium for Political Research (1996, 1999, 2001, and 2009), Florida Political Science Association (1976 and 1977), General Conference of the ECPR (2001), International Political Science Association (1985 and 1989), International Society for Political Psychology (1984), Midwest Political Science Association (1978, 1981, 1983, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2012, 2014, 2015, 2016), Public Choice Society (1983, 1985, 1998, 2000, 2003), Southern Political Science Association (1978, 1990, 1998, 2000, 2001, 2002, 2016), Southwestern Social Science Association (1981, 1982, and 1990), Western Political Science Association (1990).

Manuscript Reviewer

American Journal of Political Science, American Political Science Review, American Politics Quarterly, American Review of Politics, British Journal of Political Science, Comparative Political Studies, Comparative Politics, Election Law Journal, *Electoral Studies, Experimental Study of Politics, European Journal for Political Research, Journal of Politics, Legislative Studies Quarterly, Political Analysis, Political Geography, Party Politics, Political Research Quarterly, Polity, Social Science Quarterly, State and Local Government Review*

TEACHING

Courses

PLSC 111   American Government
PLSC 167   State Politics
PLSC 321   American Presidency
PLSC 323   Congress in American Politics
PLSC 380H   Elections around the World
PLSC 381H   Political Analysis
PLSC 382S   Political Equality
PLSC 389I   Comparative Democracies
PLSC 389L   Democracy's Invisible Hand
PLSC 481C   Seminar in American Politics: Voting Rights
PLSC 481D   Seminar in American Politics: Congress
PLSC 481H   Seminar in American Politics: Congressional Elections
PLSC 481I   Seminar in American Politics: Fair & Effective Represenation
PLSC 481K   Seminar In American Politics: Presidency
PLSC 500   Research Methods and Statistics I
PLSC 501   Research Methods and Statistics II
PLSC 521   Program Planning and Evaluation
PLSC 600A   Advanced Quantitative Methods: Formal Modeling
PLSC 600E   Advanced Quantitative Methods: Measurement Models
PLSC 600D   Advanced Quantitative Methods: Dynamic Models
PLSC 606B   Advanced Quantitative Methods: Maximum Likelihood
PLSC 606H   Advanced Quantitative Methods: Extensions of Linear Models
PLSC 630   American Political Institutions
PLSC 633   Advanced Doctoral Seminar in Policy Analysis
PLSC 633N   The American Macro Polity
PLSC 663R   Comparative Democracies
PLSC 663T   Electoral Systems

Teaching Awards

Outstanding Teacher in Political Science, awarded by the Department of
    Political Science (May, 1995)

Outstanding Teacher for Students with Disabilities, awarded by the Office
    of Students with Disabilities (May, 1995)

Ph.D. Students (initial appointment)

Rosalyn Broussard, University of Wisconsin—Plattesville (WI)
Liza Benham, Western Kentucky University (KY)
Robin Best, Leiden University (Netherlands)
Odul Celep, East Stroudsburg University (PA)
Steve Chapman. Monmouth University (NJ)
Paula Duda, Kutztown University (PA)
Y. Alper Ecevit, Bahçeşehir University (Turkey)
Ronald Ketter, University of Texas-El Paso (TX)
Myunghee Kim, Southern Illinois University (IL)

Steve Lem, Kent State University (OH)
DeWayne Lucas, Hobart and William Smith (NY)
Kimberly Maslin-Wicks, Hendrix College (AR)
Matthew McCoy, Kings County Contracting Office (Seattle, WA)
Silvia Mendes, University of Minho (Portugal)
Mert Moral (Sabanci University, Turkey)
Scott Pandich, SUNY-Geneseo (NY)
Nadia Rubaii, New Mexico State University (NM)
Nicole Sirju-Johnson, Binghamton University (Director, Multicultural Resource Center)
Adriana Takada, Brown University (RI)
Eric Walsh, University at Albany (NY)
Brandon Zicha, University of Antwerp (Belgium)
Josh Zingher, University of Oklahoma {post-doc} (OK)

Exhibit 2

McDonald's Secondary Materials

Blalock, Hubert M. Jr. 1979. Social Statistics (revised 2nd ed.), New York, NY: McGraw-Hill, pp. 208-13.

de Benedictis-Kessner, Justin. 2015.   "Evidence in Voting Rights Act Litigation Producing Accurate Estimates of Racial Voting Patterns," Election Law Journal 14: 361-81.

Engstrom & McDonald. 1985. "Quantitative Evidence in Vote Dilution Litigation: Political Participation and Polarized Voting", 17 Urban Lawyer 369-77.

Engstrom, Richard L. and Michael D. McDonald. "Quantitative Evidence in Vote Dilution Litigation, Part II: Minority Coalitions and Multivariate Analysis." Urban Lawyer, 19 (Winter 1987): 65-75.

Gray, Virginia, 1976, "A Note on Competition and Turnout in American States." Journal of Politics 38: 153-58.

Grofman, Bernard, Michael Migalski, and Nicholas Noviello. 1985. "The 'Totality of Circumstances Test' in Section 2 of the 1982 Extension of the Voting Rights Act: A Social Science Perspective, 7 Law & Policy 7: 199-220.

Grofman, Bernard. 1993. "The Use of Ecological Regression to Estimate Racial Bloc Voting," University of San Francisco Law Review 27:593-625.

Grofman, Bernard and Jennifer R. Garcia. 2014. "Using Spanish Surname to estimate Hispanic Voting Population in Voting Rights Litigation: A Model of Context Effects Using Bayes' Theorem." Election Law Journal 13: 375-93.

"In Memory of Peter McGowan". New York Times. (March 6, 2006).

Jacobson, Gary. 2013. The Politics of Congressional Elections. Boston, MA: Pearson.

Kerlinger, Fred N. and Howard B. Lee. (2000). Foundations of Behavioral Research. Belmont, CA: Wadsworth, pp. 232-3.

King, Gary. 1997. A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data. Princeton, NJ: Princeton University Press.

Lau, Olivia, Ryan T. Moore, and Michael Kellerman. 2007. "eiPack: R x C Ecological Inference and Higher Dimension Data Management," R News 7:43-7.

Litchman, Allan J. 1991. "Passing the Test: Ecological Regression in the Los Angeles County Case and Beyond." Evaluation Review 15: 770-99.

Rosenstone, Steven, J. and John Mark Hansen. 1993. Mobilization, Participation, and Democracy in America. New York, NY: Macmillan.

Thornburg v Gingles 478 U.S. 30 (1986)

Word, David L. and R. Colby Perkins Jr. (1996) *Building a Spanish Surname List for the 1990s: A New Approach to an Old Problem* (Technical Working Paper #13). Population Division U.S. Bureau of the Census: Washington, DC.

Hypothetical District Data for Projection Analysis

The projection analysis using the ED-based district plan developed by Professor Beveridge listed EDs in four districts in an EXCEL spreadsheet. The hypothetical majority-Latino CVAP district contains the following EDs: 3009, 3029, 3033, 3055, 3059, 3060, 3063, 3068, 3073, 3083, 3084, 3085, 3092, 3093, 3094, 3095, 3096, 3100, 3104, 3111, 3113, 3115, 3117, 3119, 3124, 3125, 3156, 3160, 3174, 3175, 3176, 3190, 3194, 3199, 3200, 3204, 3205, 3206, 3207, 3219, and 3226.

The data of vote tallies received from the Suffolk County Board of Elections for the 2017 election do not contain votes from EDs 3219 and 3226.

Election Coverage and Associated Demographic Data Used

All election and demographic data were delivered to me in electronic form by Professor Andrew Beveridge. Each election came in a separate file. Candidate votes were tallied across the one or more party lines on which the candidate appeared. Candidate vote percentage calculations are votes as a percentage of the two major candidate totals in vote-for-one offices (e.g., Town Supervisor, Governor, and President) and of a candidate's votes as a percentage of voters at the polls in Town Council elections.

The group voting age population percentages were calculated using the following variables:
    Total citizen voting age population = cvap*year*totx
    Hispanic voting age population = cvap*year*hisp
    Non-Hispanic black voting age population = cvap*year*nh_blk_all
    White citizen voting age population = cvap*year*totx – (cvap*year*hisp + cvap*year*nh_blk_all)
The reference to *year* indicates which one of the various CVAP counts listed in the table below was used for any given year. For example the total citizen voting age population variable used in the 2017 Town Council election is cvap1216totx.

Office	Year	Demographic Data	
Town Clerk	2007	CVAP 2005-09	
	2011	CVAP 2009-13	
	2015	CVAP 2012-16	
Town Supervisor	2006	CVAP 2005-09	
	2007	CVAP 2005-09	
	2011	CVAP 2009-13	
	2015	CVAP 2012-16	
Town Tax Receiver	2007	CVAP 2005-09	
	2011	CVAP 2009-13	
	2015	CVAP 2012-16	
Town Council	2005	CVAP 2005-09	
	2007	CVAP 2005-09	
	2009	CVAP 2007-11	
	2011	CVAP 2009-13	
	2013	CVAP 2011-15	
	2015	CVAP 2012-16	
	2017	CVAP 2012-16	
Proposition	2006	CVAP 2005-09	
County Executive	2007	CVAP 2005-09	
	2011	CVAP 2009-13	
	2015	CVAP 2012-16	
County Comptroller	2014	CVAP 2012-16	

County Clerk	2006	CVAP 2005-09	
County DA	2017	CVAP 2012-16	
County Sheriff	2005	CVAP 2005-09	
	2017	CVAP 2012-16	
County Treasurer	2005	CVAP 2005-09	
	2009	CVAP 2007-11	
County Leg LD9	2013	CVAP 2011-15	
	2015	CVAP 2012-16	
	2017	CVAP 2012-16	
President	2008	CVAP 2005-09	
	2012	CVAP 2010-14	
	2016	CVAP 2012-16	
U.S. House, CD2 part	2012	CVAP 2010-14	
	2014	CVAP 2012-16	
	2016	CVAP 2012-16	
U.S. Senate	2006	CVAP 2005-09	
	2010A	CVAP 2008-12	
	2010B	CVAP 2008-12	
	2014	CVAP 2012-16	
	2016	CVAP 2012-16	
NYS Governor	2006	CVAP 2005-09	
	2010	CVAP 2008-12	
	2014	CVAP 2015	
NYS Comptroller	2006	CVAP 2005-09	
	2010	CVAP 2008-12	
	2014	CVAP 2015	
NYS Atty General	2006	CVAP 2005-09	
	2010	CVAP 2008-12	
	2014	CVAP 2015	

Data for the 2017 Check on Reliable Counts of Sign-in Data
as Prelude to Choosing a Turnout Rate Estimator

Data on the count of Spanish surname voters at the polls in 2017 were delivered to me as summary statistics in the form of the table below. The information I used comes from the "All of Islip" row in the table.

Geographic Area	Total Vote Count	Latino Voting Estimates		Based Upon Grofman and Garcia Method
		Based Upon Census Working Paper		
		No multiplier	1.5x multiplier	
All of Islip	62,632	3,722	5,584	4,688
PUMA: 3603309	28,251	770	1,155	970
PUMA: 3603310	11,802	2,288	3,431	2,882
PUMA: 3603311	22,579	665	997	838